## EXHIBIT B7

Page 1

IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF NEW JERSEY

- - -

IN RE: JOHNSON & :
JOHNSON TALCUM POWDER :
PRODUCTS MARKETING, :

SALES PRACTICES, AND : NO. 16-2738 PRODUCTS LIABILITY : (FLW) (LHG)

LITIGATION

:

THIS DOCUMENT RELATES : TO ALL CASES :

- - -

April 8, 2019

- - -

Videotaped deposition of BROOKE T. MOSSMAN, M.S., Ph.D., taken pursuant to notice, was held at Hotel Vermont, 41 Cherry Street, Burlington, Vermont, beginning at 9:12 a.m., on the above date, before Michelle L. Gray, a Registered Professional Reporter, Certified Shorthand Reporter, Certified Realtime Reporter, and Notary Public.

- - -

GOLKOW LITIGATION SERVICES 877.370.3377 ph | 917.591.5672 fax deps@golkow.com

## Case 3:16-md-02738-MAS-RLS Document 9731-6 Filed 05/07/19 Page 3 of 130 PageID: 33091

Brooke T. Mossman, M.S., Ph.D.

	Page	2		Page 4
1	APPEARANCES:	1		
2	THE SMITH LAW FIRM, PLLC	2		
	BY: R. ALLEN SMITH, JR., ESQ.		INDEX	
4	300 Concourse Boulevard	3		
5	Suite 104 Ridgeland, Mississippi 39157	4		
	(601) 952-1422	5	Testimony of:	
6 7	Allen@smith-law.org	6	BROOKE T. MOSSMAN, M.S., Ph.D.	
8	- and - BEASLEY ALLEN, P.C.		By Mr. Smith 14	
	BY: P. LEIGH O'DELL, ESQ.	7 8		
9	218 Commerce Street Montgomery, Alabama 36104	9		
10	(334) 269-2343	10		
	leigh.odell@beasleyallen.com	11		
11	and		EXHIBITS	
12	- and -	12		
	ROBINSON CALCAGNIE, INC.	13		
13	BY: CYNTHIA L. GARBER, ESQ. 19 Corporate Plaza Drive	14	NO. DESCRIPTION PAGE	
14	Newport Beach, California 92660	15 16	Mossman-1 Notice of Deposition 14 Mossman-2 Invoices from 16	
1 -	(949) 720-1288		Toxico.Logic, Inc.	
15	cgarber@robinsonfirm.com Representing the Plaintiffs	17	Massaca 2 Sumlanistal 16	
16	representing the Figure 11	18	Mossman-3 Supplemental 16 Materials Considered	
17		19	Mossman-4 Systems Analysis of 58	
18 19		20	ATF3 in Stress Response (Tanaka)	
20		21	Mossman-5 Letter, 1/12/90 76	
21			From Mossman to	
22 23		22 23	McElveen	
24		24		
	Page	3		Page 5
1	Page APPEARANCES: (Cont'd.)	3		Page 5
2	APPEARANCES: (Cont'd.)	1 2	EXHIBITS (Cont'd.)	Page 5
2	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ.	1	EXHIBITS (Cont'd.)	Page 5
2	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive	1 2 3 4 5	NO. DESCRIPTION PAGE	Page 5
2	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106	1 2 3 4	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79	Page 5
2 3 4	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com	1 2 3 4 5 6	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley	Page 5
2 3 4 5	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106	1 2 3 4 5 6	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82	Page 5
2 3 4 5 6 7	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP	1 2 3 4 5 6 7 8	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC)	Page 5
2 3 4 5	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -	1 2 3 4 5 6	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83	Page 5
2 3 4 5 6 7	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005	1 2 3 4 5 6 7 8	NO. DESCRIPTION PAGE  Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley  Mossman-7 Partial Listing 82 Of Key Scientists (TASSC)  Mossman-8 Constructing Sound 83 Science and Good Epidemiology	Page 5
2 3 4 5 6 7 8	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N, FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com	1 2 3 4 5 6 7 8 9 10	NO. DESCRIPTION PAGE  Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley  Mossman-7 Partial Listing 82 Of Key Scientists (TASSC)  Mossman-8 Constructing Sound 83 Science and Good	Page 5
2 3 4 5 6 7 8	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008	1 2 3 4 5 6 7 8 9 10 11	NO. DESCRIPTION PAGE  Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley  Mossman-7 Partial Listing 82 Of Key Scientists (TASSC)  Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88	Page 5
2 3 4 5 6 7 8 9	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N, FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities	1 2 3 4 5 6 7 8 9 10 11 12	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)	Page 5
2 3 4 5 6 7 8 9 10	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson	1 2 3 4 5 6 7 8 9 10 11	NO. DESCRIPTION PAGE  Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley  Mossman-7 Partial Listing 82 Of Key Scientists (TASSC)  Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88	Page 5
2 3 4 5 6 7 8 9 10 11 12 13	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW	1 2 3 4 5 6 7 8 9 10 11 12	NO. DESCRIPTION PAGE  Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley  Mossman-7 Partial Listing 82 Of Key Scientists (TASSC)  Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman  Mossman-10 Doubt is Their 92 Product	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400	1 2 3 4 5 6 7 8 9 10 11 12 13 14	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman Mossman-10 Doubt is Their 92	Page 5
2 3 4 5 6 7 8 9 10 11 12 13	APPEARANCES: (Cont'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman Mossman-10 Doubt is Their Product (Michaels)  Mossman-11 Special 96	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC	1 2 3 4 5 6 7 8 9 10 11 12 13 14	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman Mossman-10 Doubt is Their 92 Product (Michaels)	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC  TUCKER ELLIS, LLP BY: JAMES W. MIZGALA, ESQ.	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman Mossman-10 Doubt is Their 92 Product (Michaels)  Mossman-11 Special 96 Contributions Correspondence About Publication Ethics	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC  TUCKER ELLIS, LLP BY: JAMES W. MIZGALA, ESQ. 233 South Wacker Drive	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman Mossman-10 Doubt is Their Product (Michaels)  Mossman-11 Special 96 Contributions Correspondence About Publication Ethics And Regulatory	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC  TUCKER ELLIS, LLP BY: JAMES W. MIZGALA, ESQ. 233 South Wacker Drive Suite 6950 Chicago, Illinois 60606	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman Mossman-10 Doubt is Their 92 Product (Michaels)  Mossman-11 Special 96 Contributions Correspondence About Publication Ethics And Regulatory Toxicology and Pharmacology	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC  TUCKER ELLIS, LLP BY: JAMES W. MIZGALA, ESQ. 233 South Wacker Drive Suite 6950	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman Mossman-10 Doubt is Their 92 Product (Michaels)  Mossman-11 Special 96 Contributions Correspondence About Publication Ethics And Regulatory Toxicology and Pharmacology (Chrisman)	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC  TUCKER ELLIS, LLP BY: JAMES W. MIZGALA, ESQ. 233 South Wacker Drive Suite 6950 Chicago, Illinois 60606 (312) 624-6307 james.mizgala@tuckerellis.com Representing the Defendant, PTI	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman  Mossman-10 Doubt is Their 92 Product (Michaels)  Mossman-11 Special 96 Contributions Correspondence About Publication Ethics And Regulatory Toxicology and Pharmacology (Chrisman)  Mossman-12 Assessment of the 110 Pathogenic Potential	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC  TUCKER ELLIS, LLP BY: JAMES W. MIZGALA, ESQ. 233 South Wacker Drive Suite 6950 Chicago, Illinois 60606 (312) 624-6307 james.mizgala@tuckerellis.com Representing the Defendant, PTI Royston LLC and PTI Union LLC	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman  Mossman-10 Doubt is Their 92 Product (Michaels)  Mossman-11 Special 96 Contributions Correspondence About Publication Ethics And Regulatory Toxicology and Pharmacology (Chrisman)  Mossman-1.2 Assessment of the 110 Pathogenic Potential Of Asbestiform v	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC  TUCKER ELLIS, LLP BY: JAMES W. MIZGALA, ESQ. 233 South Wacker Drive Suite 6950 Chicago, Illinois 60606 (312) 624-6307 james.mizgala@tuckerellis.com Representing the Defendant, PTI	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman  Mossman-10 Doubt is Their 92 Product (Michaels)  Mossman-11 Special 96 Contributions Correspondence About Publication Ethics And Regulatory Toxicology and Pharmacology (Chrisman)  Mossman-12 Assessment of the 110 Pathogenic Potential	Page 5
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	APPEARANCES: (Con'd.)  DRINKER BIDDLE & REATH LLP BY: JACK N. FROST, JR., ESQ. 600 Campus Drive Florham Park, New Jersey 07932 (973)549.7106 Jack.frost@dbr.com  - and -  SKADDEN, ARPS, SLATE, MEAGHER & FLOM LLP BY: GEOFFREY M. WYATT, ESQ. 1440 New York Avenue, NW Washington, D.C. 20005 (202) 371-7008 geoffrey.wyatt@skadden.com Representing the Defendants, Johnson & Johnson entities  SEYFARTH SHAW, LLP BY: RENÉE B. APPEL, ESQ. 975 F Street, NW Washington, D.C. 20004 (202) 463-2400 rappel@seyfarth.com Representing the Defendant, PCPC  TUCKER ELLIS, LLP BY: JAMES W. MIZGALA, ESQ. 233 South Wacker Drive Suite 6950 Chicago, Illinois 60606 (312) 624-6307 james.mizgala@tuckerellis.com Representing the Defendant, PTI Royston LLC and PTI Union LLC	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	NO. DESCRIPTION PAGE Mossman-6 Letter, 11/18/88 79 From Mossman to Hadley Mossman-7 Partial Listing 82 Of Key Scientists (TASSC) Mossman-8 Constructing Sound 83 Science and Good Epidemiology (Ong)  Mossman-9 Curriculum Vitae 88 Of Dr. Mossman Mossman-10 Doubt is Their 92 Product (Michaels)  Mossman-11 Special 96 Contributions Correspondence About Publication Ethics And Regulatory Toxicology and Pharmacology (Chrisman)  Mossman-12 Assessment of the Pathogenic Potential Of Asbestiform v Non-asbestiform	Page 5

2 (Pages 2 to 5)

## Case 3:16-md-02738-MAS-RLS Document 9731-6 Filed 05/07/19 Page 4 of 130 PageID: 33092

Brooke T. Mossman, M.S., Ph.D.

E X H I B I T S (Cont'd.)  NO. DESCRIPTION PAGE Mossman-13 Cosmetic Talc Should 113 Not Be Listed as a Carcinogen (Wehner) JNJ 000018716	1	
Mossman-13 Cosmetic Talc Should 113 Not Be Listed as a Carcinogen (Wehner)	5 NO. DESCRIPTION PAGE 6 Mossman-27 Oxidative Stress in 299 Female Cancers 7 (Calaf)	
Mossman-13 Cosmetic Talc Should 113 Not Be Listed as a Carcinogen (Wehner)	6 Mossman-27 Oxidative Stress in 299 Female Cancers 7 (Calaf)	
Not Be Listed as a Carcinogen (Wehner)	7 (Calaf)	
Carcinogen (Wehner)	( ,	
(Wehner)		
INT 000019716	8 Mossman-28 Inflammation Markers 304 And Risk of Endometrial	
	9 And Ovarian Cancer	
Mossman-14 Talc Occurrence 113	(Wentzensen)	
Characterization and Consumer Applications	10	
	Mossman-29 Inflammation is a 308	
Mossman-15 Prop 65 121	12 Cell Seeding	
Talc Containing	(Jia)	
Asbestiform Fibers	15	
	Mossman-31 Biologic 315	
Mossman-17 University of Vermont 132		
	(Demonstrative)	
	18 Manager 22 Translated 222	
Subject, Cornstarch		
Development		
JNJ 000265536-38	20 (Miserocchi)	
10 41 4 101	21 Mossman-33 Correlative 346	
Actinolite, and	23 Assessment of Talc	
Anthophyllite	(McDonald)	
IARC Monographs	24	
Page 7		Page 9
	1	
EXHIBITS (Cont'd.)		
	3	
Asbestos Fibers and	7 Human Mesothelial	
Other Elongate Mineral	Cells	
Particles		
NIOSH		
Mossman-21 Expert Report of 219		
Brooke T. Mossman, Ph.D.	10 Gene Profiling and	
Mossman-22 Systematic Review 226	Proteomics to	
And Meta-Analysis		
(Tanci)		
Mossman-23 Key References and 237	From Hillegass	
Reliance Materials	14 Mossman-NOD-00017-20	
Brook T. Mossman, Ph.D.	Mossman-NOD-00514	
Magaman 24 Dialogia Dlavaihility 222		
Mossman-24 Biologic Plausibility 222 Chronic Inflammation	Demonstrative Document 358	
Compilation of Quotes	17 Shukla and Concentration	
	Levels	
(Demonstrative)		
(Demonstrative) Mossman-25 Inflammation: A 264	18	
(Demonstrative)  Mossman-25 Inflammation: A 264  Hidden Path to	Mossman-38 Alterations in Gene 366	
(Demonstrative)  Mossman-25 Inflammation: A 264  Hidden Path to  Breaking the Spell	18 Mossman-38 Alterations in Gene 366 19 Expression in	
(Demonstrative)  Mossman-25 Inflammation: A 264  Hidden Path to  Breaking the Spell  Of Ovarian Cancer	18 Mossman-38 Alterations in Gene 366 19 Expression in Human Mesothelial	
(Demonstrative)  Mossman-25 Inflammation: A 264  Hidden Path to  Breaking the Spell  Of Ovarian Cancer  (Shan & Liu)	18 Mossman-38 Alterations in Gene 366 19 Expression in Human Mesothelial 20 Cells Correlate with	
(Demonstrative)  Mossman-25 Inflammation: A 264  Hidden Path to  Breaking the Spell  Of Ovarian Cancer	18 Mossman-38 Alterations in Gene 366 19 Expression in Human Mesothelial	
(Demonstrative)  Mossman-25 Inflammation: A 264  Hidden Path to  Breaking the Spell  Of Ovarian Cancer  (Shan & Liu)  Mossman-26 The Role of 277	Mossman-38 Alterations in Gene 366  19 Expression in Human Mesothelial  20 Cells Correlate with Mineral Pathogenicity  21 (Shukla)  22 Mossman-39 Table 6 from 388	
(Demonstrative)  Mossman-25 Inflammation: A 264  Hidden Path to  Breaking the Spell  Of Ovarian Cancer  (Shan & Liu)  Mossman-26 The Role of  Inflammation and	18 Mossman-38 Alterations in Gene 366  19 Expression in Human Mesothelial  20 Cells Correlate with Mineral Pathogenicity  21 (Shukla)	
	Talc Containing Asbestiform Fibers  Mossman-16 Talc Not Containing 122 Asbestiform Fibers And Talc Containing Asbestiform Fibers  And Talc Containing Asbestiform Fibers  Mossman-17 University of Vermont 132 Cancer Center Web Printout Ovarian Cancer  Mossman-18 Memo, 2/21/64 158 Subject, Cornstarch Development JNJ 000265536-38  Mossman-19 Asbestos 191 (Chrysotile, Amosite Crocidolite, Tremolite, Actinolite, and Anthophyllite IARC Monographs  Page 7  EXHIBITS (Cont'd.) EXHIBITS (Cont'd.) EXHIBITS (Cont'd.) BO. DESCRIPTION PAGE Mossman-20 Current Intelligence 196 Bulletin 62 Asbestos Fibers and Other Elongate Mineral Particles NIOSH  Mossman-21 Expert Report of 219 Brooke T. Mossman, Ph.D. Mossman-22 Systematic Review 226 And Meta-Analysis Of the Association (Taher)  Mossman-23 Key References and 237 Reliance Materials	Cazenski)

3 (Pages 6 to 9)

## Case 3:16-md-02738-MAS-RLS Document 9731-6 Filed 05/07/19 Page 5 of 130 PageID: 33093

Brooke T. Mossman, M.S., Ph.D.

Page 10	Page 12
1	DEPOSITION SUPPORT INDEX DEPOSITION SUPPORT INDEX Direction to Witness Not to Answer PAGE LINE None. Request for Production of Documents PAGE LINE 426 2  Stipulations PAGE LINE None.  Questions Marked PAGE LINE None.  Augustions Marked PAGE LINE None.  13 14 Questions Marked 15 PAGE LINE None.
24	
Page 11	Page 13
1	THE VIDEOGRAPHER: We are now on the record. My name is Dan Lawlor. I'm a videographer with Golkow Litigation Services. Today's date is April 8th, 2019. And the time is 9:12 a.m. This video deposition is being held in Burlington, Vermont, in the matter of talcum powder litigation, MDL Number 2738. Counsel will be noted on the stenographic record. The deponent today is Brooke Mossman, Ph.D. The court reporter is Michelle Gray and will now swear in the witness.   BROOKE T. MOSSMAN, M.S., Ph.D., having been first duly sworn, was examined and testified as follows:

4 (Pages 10 to 13)

	Page 14		Page 16
1	proceed.	1	to attach that as Exhibit 2.
2		2	(Document marked for
3	EXAMINATION	3	identification as Exhibit
4		4	Mossman-2.)
5	BY MR. SMITH:	5	BY MR. SMITH:
6	Q. Good morning.	6	Q. I also was provided some
7	A. Good morning.	7	supplemental I saw the materials that
8	Q. How are you, Dr. Mossman?	8	you considered that were attached to your
9	A. Fine, thank you.	9	report. And I was also provided
10	Q. We spoke on the phone on the	10	supplemental materials considered. Are
11	Brower case; is that correct?	11	these additional materials that you
12	A. We did.	12	considered in this case, besides the ones
13	Q. And I have some questions	13	that are included in your report?
14	for you here today. First thing is, I	14	A. Yes.
15	want to just attach, for reference, is	15	MR. SMITH: I'll attach that
16	the notice of your deposition, I'm going	16	as Exhibit 3.
17	to attach as Exhibit 1.	17	(Document marked for
18	Have you have you seen	18	identification as Exhibit
19	this notice of deposition?	19	Mossman-3.)
20	A. I haven't.	20	BY MR. SMITH:
21	Q. All right.	21	Q. And we'll go over your
22	(Document marked for	22	report in more detail in a little bit.
23	identification as Exhibit	23	Please state your name and
24	Mossman-1.)	24	occupation.
	Page 15		Page 17
1	BY MR. SMITH:	1	A. Brooke Taylor Mossman. I'm
2	Q. Okay. All right. And	2	a university distinguished professor in
3	pursuant to your notice of your	3	the department of pathology.
4	deposition, your counsel provided some	4	Q. Are you retired?
5	invoices. Did you provide those to your	5	A. Semi-retired, yes.
6	counsel for your time?	6	Q. What does that mean?
7	A. My my assistant did.	7	A. What it means is that I have
8	Yes.	8	an office at the university. I have some
9	Q. And I have one bill that	9	responsibilities through my office at the
10	totals \$16,548. I have another bill that	10	university, but am not being paid
11	totals \$30,626. And then I have a third	11	formally by the university anymore.
12	bill which totals \$27,151 wait	12	Q. And your professional title
13	yeah, \$151.41.	13	is that of an experimental pathologist,
14	Is that or do these three	14	correct?
15	bills constitute all of the time that you	15	A. My professional title is a
16	have billed in this case?	16	professor of pathology and laboratory
17	A. It may not have accounted	17	medicine.
18	for my time in the last week or two. I'm	18	Q. You were trained in lung
19	not sure when these were sent out.	19	pathology and disease associated with
20	Q. Absent your time in the past	20	asbestos exposure; is that correct?
.) 1	couple of weeks, would this cover the	21	A. That's correct.
21			
22	bills that you have billed in this case?	22	Q. And you do not have any
	bills that you have billed in this case?  A. I believe so, yes.  MR. SMITH: Okay. I'm going	22 23 24	Q. And you do not have any prior training in ovarian cancer; is that correct?

	Page 18		Page 20
1	MR. FROST: Objection to	1	reproductive tract?
2	form.	2	A. Yes, I've had formal courses
3	THE WITNESS: Yeah. I	3	in my training on that.
4	actually got a master's degree in	4	Q. What formal courses of
5	the department of obstetrics and	5	training have you had on the female
6	gynecology looking at cervical	6	reproductive tract?
7	cancer.	7	A. I had a master's in
8	BY MR. SMITH:	8	obstetrics and gynecology. And I had a
9	Q. I'm talking about ovarian	9	course actually it was an eight-credit
10	cancer, ma'am.	10	course which is a requirement for not
11	A. I have not been trained in	11	only the master's, but also medical
12	ovarian cancer formally.	12	students who I took the course with. And
13	Q. You're not a medical doctor?	13	this covered anatomy of the entire body.
14	A. That's correct.	14	Q. So you had an eight-hour
15	Q. And you also understand that	15	course on human female anatomy?
16	the issues involved in this case are not	16	A. No. An eight-hour course on
17	that of cervical cancer but of ovarian	17	anatomy of every organ, of which female
18	cancer? Do you understand that?	18	anatomy was included.
19	A. Yes, I do.	19	MR. FROST: I object
20	Q. You are not a diagnostic	20	belatedly to the form of that
21	pathologist, correct?	21	
22	A. Correct.	22	question. BY MR. SMITH:
23			
24	Q. You're not an epidemiologist, correct?	23 24	Q. You are not a mineralogist;
24	epideniiologist, correct?	24	is that correct?
	Page 19		Page 21
1	A. No. But I am aware of the	1	A. That's correct.
1 2	A. No. But I am aware of the epidemiological research which bolsters	1 2	
2	epidemiological research which bolsters	2	Q. You are not a geologist; is
2	epidemiological research which bolsters my opinion in this case.	2 3	Q. You are not a geologist; is that correct?
2 3 4	epidemiological research which bolsters my opinion in this case. Q. Ma'am, are you an	2 3 4	Q. You are not a geologist; is that correct? A. That's correct.
2 3 4 5	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not.	2 3 4 5	<ul><li>Q. You are not a geologist; is that correct?</li><li>A. That's correct.</li><li>Q. You are not a materials</li></ul>
2 3 4 5 6	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not.	2 3 4 5 6	Q. You are not a geologist; is that correct? A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct.
2 3 4 5 6 7	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist?	2 3 4 5 6 7	Q. You are not a geologist; is that correct? A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample
2 3 4 5 6 7 8	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an	2 3 4 5 6 7 8	Q. You are not a geologist; is that correct? A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc
2 3 4 5 6 7 8 9	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct.	2 3 4 5 6 7 8 9	Q. You are not a geologist; is that correct? A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample
2 3 4 5 6 7 8 9	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct.	2 3 4 5 6 7 8 9	Q. You are not a geologist; is that correct? A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the
2 3 4 5 6 7 8 9 10	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological	2 3 4 5 6 7 8 9 10	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct.
2 3 4 5 6 7 8 9 10 11 12	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct.	2 3 4 5 6 7 8 9 10 11 12	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a
2 3 4 5 6 7 8 9 10 11 12 13	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct.	2 3 4 5 6 7 8 9 10 11 12 13	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you
2 3 4 5 6 7 8 9 10 11 12 13 14	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct. Q. And you're not an expert in	2 3 4 5 6 7 8 9 10 11 12 13 14	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a
2 3 4 5 6 7 8 9 10 11 12 13 14 15	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist?  A. Correct. Q. And you're not an oncologist; is that correct?  A. Correct. Q. You're not a gynecological oncologist; is that correct?  A. That's correct. Q. And you're not an expert in anatomy and physiology; is that correct?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you would leave that to a mineralogist; is
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct. Q. And you're not an expert in	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you would leave that to a mineralogist; is that correct? A. I would.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct. Q. And you're not an expert in anatomy and physiology; is that correct?  MR. FROST: Objection to form.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you would leave that to a mineralogist; is that correct? A. I would. Q. You're not an expert in
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct. Q. And you're not an expert in anatomy and physiology; is that correct?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I have	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you would leave that to a mineralogist; is that correct? A. I would. Q. You're not an expert in determining the flexibility or rigidity
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct. Q. And you're not an expert in anatomy and physiology; is that correct?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I have been trained formally in medical	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you would leave that to a mineralogist; is that correct? A. I would. Q. You're not an expert in determining the flexibility or rigidity of asbestos or cleavage fragments; is
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct. Q. And you're not an expert in anatomy and physiology; is that correct?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I have been trained formally in medical anatomy of the lung, yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you would leave that to a mineralogist; is that correct? A. I would. Q. You're not an expert in determining the flexibility or rigidity of asbestos or cleavage fragments; is that correct?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct. Q. And you're not an expert in anatomy and physiology; is that correct?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I have been trained formally in medical anatomy of the lung, yes. BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you would leave that to a mineralogist; is that correct? A. I would. Q. You're not an expert in determining the flexibility or rigidity of asbestos or cleavage fragments; is that correct? A. That's correct. I don't
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	epidemiological research which bolsters my opinion in this case.  Q. Ma'am, are you an epidemiologist?  A. I am not. Q. You're not a gynecologist? A. Correct. Q. And you're not an oncologist; is that correct? A. Correct. Q. You're not a gynecological oncologist; is that correct? A. That's correct. Q. And you're not an expert in anatomy and physiology; is that correct?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I have been trained formally in medical anatomy of the lung, yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. You are not a geologist; is that correct?  A. That's correct. Q. You are not a materials analyst; is that correct? A. That's correct. Q. Analyzing whether a sample of material is talc, asbestos, or talc with asbestos, you leave to the mineralogists; is that correct? A. That's correct. Q. Same for determining if a mineral is asbestos or asbestiform, you would leave that to a mineralogist; is that correct? A. I would. Q. You're not an expert in determining the flexibility or rigidity of asbestos or cleavage fragments; is that correct?

6 (Pages 18 to 21)

	Page 22		Page 24
1	crystallinity of asbestos, cleavage	1	BY MR. SMITH:
2	fragments, or tale, you are not an expert	2	Q. Well, did you tell truthful
3	in that area either, correct?	3	testimony in the Leavitt case in trial
4	A. Correct.	4	and did you tell truthful testimony in
5	Q. Same for surface properties.	5	the Brower deposition?
6	You are not an expert in surface	6	A. Absolutely.
7	properties of asbestos, cleavage	7	Q. Okay. So I can rely on that
8	fragments, or tale; is that correct?	8	testimony as being truthful, correct?
9	MR. FROST: Objection to	9	A. Yes.
10	form.	10	Q. Okay. Thank you.
11	THE WITNESS: I have	11	All right. If you'll look
12	measured surface properties and	12	at Page 83.
13	surface charge of materials in the	13	MR. FROST: You said
14	=	14	
15	past. BY MR. SMITH:	15	February 21?
16			MR. SMITH: Yep.
	Q. Would you consider yourself	16	BY MR. SMITH:
17	an expert in this area?	17	Q. If you'll go to Line 8 and
18	A. I think you have to clarify	18	it says, "Question: And similarly
19	what an expert in surface chemistry would	19	surface properties of a particle, you
20	be.	20	leave that to mineralogists as well, and
21	Q. What would you define an	21	that's not an area within your expertise,
22	expert in surface chemistry to be?	22	correct?"
23	A. I would describe that as	23	And your answer was, "Again,
24	someone who has focused on an aspect of	24	I should emphasize that one of the things
	Page 23		Page 25
1	surface chemistry that's important. In	1	that we've done is looked at things such
2	our case, we measured zeta potential or	2	as iron using this EDAX technique."
3	surface charge of materials.	3	E-D-A-X. "So in that case, we have
4	Q. Do you believe that your	4	looked at surface iron."
5	work has that you are an expert in	5	And question again: "Okay.
6	this area because of your work in this	6	But other than looking at iron on the
7	area?	7	surface of a particle, and we'll get into
8	A. I believe I'm an expert in	8	that later, you determining surface
9	determining the surface charge of	9	properties of a particular property of a
10	materials that I have experimented with.	10	particular particle is not a matter
11	Q. Okay. Let's go to your	11	within your expertise, correct?
12	Leavitt deposition trial testimony, if	12	"I don't do that, yes,
13	you wouldn't mind. It's on Page 83. And	13	that's correct."
14	it should be of the February session,	14	Is that the correct answer?
15	February 21st session.	15	MR. FROST: Objection to
16	Let me ask you this. Can I	16	form.
17	rely on your prior trial testimony in the	17	THE WITNESS: Yeah, surface
18	Leavitt case and your prior deposition	18	properties and surface charge are
19	testimony in the Brower case?	19	two different things. Surface
20	MR. FROST: Objection to	20	charge being a subset of surface
21	form.	21	properties.
22	THE WITNESS: Yeah, I'm not	22	So as I emphasize, I have
23	sure what you mean, sir, in terms	23	measured the surface charge of
		1	
24	of rely upon.	24	materials, including tale, and

	Page 26		Page 28
1	that has been published.	1	Is that true?
2	BY MR. SMITH:	2	A. Yes.
3	Q. Can I rely on your testimony	3	Q. And next question: "You've
4	that I just read in Leavitt as accurate	4	never been involved in the care and
5	and truthful?	5	treatment of a person with mesothelioma,
6	MR. FROST: Objection to	6	correct?"
7	form.	7	"I have not treated them,
8	THE WITNESS: In terms of	8	that's correct. I have been
9		9	involved in studying drugs that
10	iron, yes. BY MR. SMITH:	10	help them though."
11	Q. Thank you.	11	Is that correct?
12	•	12	A. That's correct.
13	Have you ever diagnosed or	13	
14	treated a person with mesothelioma?	14	Q. Would the same be for a
	A. I have not.		person that's been diagnosed with ovarian
15	Q. Have you ever diagnosed or	15	cancer, have you ever diagnosed or
16	treated a person with ovarian cancer?	16	treated a person with ovarian cancer?
17	A. I have not.	17	A. I have not.
18	Q. Have you ever been called	18	Q. And you have not diagnosed a
19	upon to determine what caused a person's	19	person with mesothelioma, correct?
20	mesothelioma?	20	MR. FROST: Objection, asked
21	A. You'll have to be a little	21	and answered.
22	more explicit. What do you mean by	22	THE WITNESS: Yeah.
23	called upon?	23	BY MR. SMITH:
24	Q. Can you go to your Leavitt	24	Q. And you have never diagnosed
	Page 27		Page 29
1	testimony Page 78.	1	a person with ovarian cancer, correct?
2	A. Mm-hmm.	2	MR. FROST: Same objection.
3	Q. It says, "Question: You	3	THE WITNESS: That's
4	have never diagnosed mesothelioma in a	4	correct.
5	human being?	5	BY MR. SMITH:
6	"That's correct."	6	Q. And the levels of exposure
7	Is that true?	7	of each type of asbestos in terms of
8	MR. FROST: I'm sorry,	8	human risk are outside of your area of
9	what where are you?	9	expertise; is that correct?
10	THE WITNESS: Yeah, I'm	10	MR. FROST: Objection to
11	BY MR. SMITH:	11	form.
12	Q. Page I'm sorry, Page 78,	12	THE WITNESS: Yeah. You're
13	Line 11 through 13.	13	going to have to be a little a
14	MR. FROST: Okay.	14	little more specific on that. I
15	THE WITNESS: Okay.	15	don't
16	BY MR. SMITH:	16	BY MR. SMITH:
17	Q. "Question: And you've never	17	Q. Okay. Let's go to Leavitt
18	been diagnosed" "you've never"	18	testimony Page 92.
19	excuse me.	19	All right. Starting on
20	"Question: And you have	20	page excuse me, Page 92, Line 10.
21	never diagnosed mesothelioma in any human	21	"Question: As then you can
22	being, correct?"	22	see on the next page and a half, the
23	Your answer was, "That's	23	lawyer asked you about each type of
24	correct."	24	asbestos, crocidolite, amosite,
			and the state of t

8 (Pages 26 to 29)

	Page 30		Page 32
	Page 30		Page 32
1	tremolite, actinolite, anthophyllite,	1	A. I'm getting there.
2	chrysotile. Did you see that?"	2	Q. And if you'll focus in on
3	And your answer was, "I do."	3	Line 14.
4	"Question: And each time	4	"Question: Is it important
5	you said that that was outside of your	5	to understand cancer development in your
6	area of expertise?	6	opinion?
7	"Answer: Yes, the levels of	7	"Answer: Yes."
8	exposure of these in terms of human risk	8	Can I rely on that testimony
9	are outside of my area of expertise."	9	as truthful?
10	Is that truthful testimony	10	MR. FROST: Objection to
11	and can I rely on that today?	11	form.
12	MR. FROST: Objection to	12	THE WITNESS: Yes, it was a
13	form.	13	very broad question, but in
14	THE WITNESS: Yeah. That's	14	general, yes, the answer's
15	truthful, my statement is	15	correct.
16	truthful.	16	BY MR. SMITH:
17	BY MR. SMITH:	17	Q. Cell cultures or in vitro
18	Q. Thank you.	18	studies are valuable in determining
19	Is it important to	19	mechanisms on cancer causation, correct?
20	understand cancer development?	20	A. Yes. They're part of the
21	MR. FROST: Objection to	21	hierarchy of studying different elements
22	form.	22	of or models of cancer development.
23	MR. SMITH: What's the	23	Q. One way to determine if
24	matter with the form of the	24	biological mechanisms or pathways are
	matter with the form of the	27	biological mechanisms of pathways are
	Page 31		Page 33
1	question?	1	triggered is to conduct in vitro studies
2	MR. FROST: I don't	2	of relevant cells of disease and exposure
3	understand what you mean by	3	to the questioned substance; is that
4	"important to understand cancer	4	correct?
5	development."	5	A. Yes.
6	BY MR. SMITH:	6	Q. You would agree with me that
7	Q. Do you understand what I	7	it is important to identify and, if
8	mean by "it's important to understand	8	possible, eliminate substances that
9	cancer development," Doctor?	9	increase human risk of contracting
10	A. It it's very broad.	10	cancer?
11	It's it's important for what?	11	MR. FROST: Objection to
12	Q. Let's go to your deposition	12	form.
13	testimony in Brower.	13	MR. SMITH: What's the
14	A. Okay.	14	matter with the form?
15	Q. You got that in front of	15	MR. FROST: Again, I think
16	you, Doctor?	16	it's very vague to identify
17	A. I I think that's Leavitt.	17	impossible or important to
18	MR. FROST: I believe this	18	identify impossible to eliminate
19	is it. October 26th.	19	substances. Compound question.
20	It fell apart.	20	It's also vague as to what you
21	BY MR. SMITH:	21	mean by important.
22	Q. Page 49, Doctor. You there?	22	BY MR. SMITH:
23	A. I am not yet, sorry.	23	Q. Do you understand the
24	Q. That's okay.	24	question, Doctor?
1 -	ζ	ı	9000001, 100001.

9 (Pages 30 to 33)

	Page 34		Page 36
1	A. I don't.	1	BY MR. SMITH:
2	Q. Why don't we go to your	2	Q. I understand potency. And
3	deposition testimony in Brower. Page 49.	3	we talked about potency and how
4	Question, Line 6: "I'm asking in	4	crocidolite is more potent than, say,
5	general, is it important as a scientist	5	chrysotile. And that's not what I'm
6	to identify and, if possible, eliminate	6	talking about, Doctor.
7	any substances, if possible, that	7	You would agree with me that
8	increase the risk of ovarian excuse	8	all types of asbestos are carcinogenic to
9	me of contracting cancer?"	9	human beings, correct?
10	And your answer was, "Yes,	10	MR. FROST: Objection to
11	in principle."	11	form.
12	Can I rely on that as	12	THE WITNESS: Not really. I
13	truthful?	13	wouldn't agree with you without
14	A. Yes.	14	qualifying that statement with
15	MR. FROST: I'll also lodge	15	regard to consideration for
16	the same question that Mr. Bishop	16	example, IARC does consider all
17	lodged to that question in that	17	types of asbestos as carcinogenic.
18	deposition.	18	But as a scientist, it
19	BY MR. SMITH:	19	depends upon the type of asbestos
20		20	and the dose that determines
21	Q. Chronic inflammation and	21	
22	oxidative stress are two mechanisms that	22	whether or not it's a carcinogen. BY MR. SMITH:
	promote tumor and cancer development in	23	
23	known carcinogens; is that correct?	24	Q. So you're saying that not all types of asbestos are carcinogenic to
24	A. That is true with regard to	24	an types of aspestos are carcinogenic to
	Page 35		Page 37
1	certain types of asbestos, correct.	1	human beings?
2	Q. And other known carcinogens,	2	MR. FROST: Objection to
3	correct?	3	form.
4	A. The only carcinogen in terms	4	THE WITNESS: I'm saying
5	of chronic inflammation that I'm aware of	5	that there are many types of
6	has been cigarette smoke.	6	tumors in humans, that with regard
7	Q. And we'll talk about chronic	7	to asbestos there are certain
8	inflammation and oxidative stress later.	8	types that are associated with
	Dut ashastas is a lunarum asmaina san	9	
9	But asbestos is a known carcinogen,	)	asbestos exposures at high
10	correct?	10	asbestos exposures at high concentrations.
	<u> </u>		
10	correct?	10	concentrations.
10 11	correct? A. That, again, is a very broad	10 11	concentrations. BY MR. SMITH:
10 11 12	correct?  A. That, again, is a very broad statement. Asbestos types vary in their	10 11 12	concentrations. BY MR. SMITH: Q. My question is just really
10 11 12 13	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.	10 11 12 13	concentrations. BY MR. SMITH: Q. My question is just really more simple. I understand that you can
10 11 12 13 14	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos,	10 11 12 13 14	concentrations. BY MR. SMITH: Q. My question is just really more simple. I understand that you can have levels of exposure and potency of
10 11 12 13 14 15	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos, regardless of type, are human carcinogens, correct?	10 11 12 13 14 15	concentrations. BY MR. SMITH: Q. My question is just really more simple. I understand that you can have levels of exposure and potency of different types of asbestos. But do you
10 11 12 13 14 15 16	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos, regardless of type, are human	10 11 12 13 14 15 16	concentrations.  BY MR. SMITH:  Q. My question is just really more simple. I understand that you can have levels of exposure and potency of different types of asbestos. But do you consider crocidolite a human carcinogen?  A. I do.
10 11 12 13 14 15 16 17	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos, regardless of type, are human carcinogens, correct?  MR. FROST: Objection to form.	10 11 12 13 14 15 16 17	concentrations.  BY MR. SMITH:  Q. My question is just really more simple. I understand that you can have levels of exposure and potency of different types of asbestos. But do you consider crocidolite a human carcinogen?  A. I do.  Q. Do you consider chrysotile a
10 11 12 13 14 15 16 17 18	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos, regardless of type, are human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: Again, I want	10 11 12 13 14 15 16 17	concentrations. BY MR. SMITH: Q. My question is just really more simple. I understand that you can have levels of exposure and potency of different types of asbestos. But do you consider crocidolite a human carcinogen? A. I do. Q. Do you consider chrysotile a human carcinogen?
10 11 12 13 14 15 16 17 18 19 20	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos, regardless of type, are human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: Again, I want to emphasize that it's a hierarchy	10 11 12 13 14 15 16 17 18 19 20	concentrations.  BY MR. SMITH:  Q. My question is just really more simple. I understand that you can have levels of exposure and potency of different types of asbestos. But do you consider crocidolite a human carcinogen?  A. I do.  Q. Do you consider chrysotile a human carcinogen?  A. I do with regard to lung
10 11 12 13 14 15 16 17 18 19 20 21	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos, regardless of type, are human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: Again, I want to emphasize that it's a hierarchy of effects, and it depends upon	10 11 12 13 14 15 16 17 18 19 20 21	concentrations.  BY MR. SMITH:  Q. My question is just really more simple. I understand that you can have levels of exposure and potency of different types of asbestos. But do you consider crocidolite a human carcinogen?  A. I do.  Q. Do you consider chrysotile a human carcinogen?  A. I do with regard to lung cancer. I think it's very questionable
10 11 12 13 14 15 16 17 18 19 20	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos, regardless of type, are human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: Again, I want to emphasize that it's a hierarchy of effects, and it depends upon the tumors that you're talking	10 11 12 13 14 15 16 17 18 19 20	concentrations.  BY MR. SMITH:  Q. My question is just really more simple. I understand that you can have levels of exposure and potency of different types of asbestos. But do you consider crocidolite a human carcinogen?  A. I do.  Q. Do you consider chrysotile a human carcinogen?  A. I do with regard to lung cancer. I think it's very questionable with regards to mesothelioma.
10 11 12 13 14 15 16 17 18 19 20 21	correct?  A. That, again, is a very broad statement. Asbestos types vary in their potency for cancer.  Q. All types of asbestos, regardless of type, are human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: Again, I want to emphasize that it's a hierarchy of effects, and it depends upon	10 11 12 13 14 15 16 17 18 19 20 21 22	concentrations.  BY MR. SMITH:  Q. My question is just really more simple. I understand that you can have levels of exposure and potency of different types of asbestos. But do you consider crocidolite a human carcinogen?  A. I do.  Q. Do you consider chrysotile a human carcinogen?  A. I do with regard to lung cancer. I think it's very questionable

	Page 38		Page 40
1	MR. FROST: Object to form.	1	disagree with NTP and IARC if they
2	THE WITNESS: Yeah. I don't	2	classify all types of asbestos, every
3	think that there is any human data	3	single one of them, as a human
4	available to classify actinolite	4	carcinogen, and you're telling me
5	as a human carcinogen.	5	actinolite, there's not data to support
6	BY MR. SMITH:	6	it's a carcinogen? How are you not
7	Q. And IARC and NTP disagree	7	disagreeing with the NTP and IARC on that
8	with your assessment on that, don't they?	8	matter then?
9	MR. FROST: Objection to	9	MR. FROST: Objection to
10	form. Misstates document.	10	form.
11	THE WITNESS: Yeah. Let me	11	THE WITNESS: I don't
12	just state that I think both	12	believe they have statements on
13	agencies would consider that there	13	different types of asbestos such
14	are no data in humans on	14	as actinolite.
15	actinolite to prove its	15	BY MR. SMITH:
16	carcinogenicity.	16	Q. Okay. We'll go get to that
17	BY MR. SMITH:	17	in a minute. Does do you consider
18	Q. There have been formal	18	tremolite a human carcinogen?
19	statements by the national toxicology	19	MR. FROST: Objection to
20	program of the United States, and in a	20	form.
21	monograph by IARC that say that all types	21	THE WITNESS: Again, it
22	of asbestos are human carcinogens. You	22	depends on the type of tumor you
23	know that, Doctor, correct?	23	are talking about and the dose of
24	A. I do.	24	the material and the form.
	71. 1 do.		the material and the form.
	Page 39		Page 41
1	MR. FROST: Objection to	1	BY MR. SMITH:
2	form.	2	Q. Can it cause cancer in human
3	BY MR. SMITH:	3	beings?
4	Q. So	4	MR. FROST: Objection to
5	A. But that but let me just	5	form.
6	emphasize here that lumping asbestos into	6	THE WITNESS: If you're
7	one category has been necessary in terms	7	talking about tremolite asbestos,
8	of risk assessment, but in terms of	8	there is some data suggesting,
9	biological effects, that statement may	9	yes, that it can cause
10	not be true, especially in humans.	10	mesothelioma.
11	Q. So you disagree with the	11	BY MR. SMITH:
12	assessment of the national toxicology	12	Q. What about anthophyllite?
13	program for the United States government	13	MR. FROST: Same objection.
14	and IARC on this matter?	14	THE WITNESS: Yeah. A very
15	MR. FROST: Objection to	15	weak carcinogen compared to
16	form. Misstates the document.	16	crocidolite or amosite, certainly
17	THE WITNESS: I don't	17	in mesothelioma.
18	disagree. I'm just saying that	18	BY MR. SMITH:
19	there are no data scientifically	19	Q. So you believe that all
20	to support the premise that	20	types of asbestos are human carcinogens
21	something like actinolite asbestos	21	except actinolite?
22	is a human carcinogen.	22	MR. FROST: Objection to
23	BY MR. SMITH:	23	form. Misstates testimony.
24	Q. Well, how do you not	24	THE WITNESS: No, that's not
19 20 21 22 23	there are no data scientifically to support the premise that something like actinolite asbestos is a human carcinogen.  BY MR. SMITH:	19 20 21 22 23	BY MR. SMITH: Q. So you believe that all types of asbestos are human carcino except actinolite? MR. FROST: Objection to form. Misstates testimony.

11 (Pages 38 to 41)

	Page 42		Page 44
1	what I'm saying. I'm saying that	1	A. Those are pathways that
2	if one looks at the scientific	2	we've studied, yes.
3	data on human population, there's	3	Q. And you stated you do not
4	not clear-cut information on the	4	need all of these factors to cause
5	doses of certain materials such as	5	cancer; is that right?
6	tremolite, such as actinolite, in	6	A. I think you need to be a
7	terms of carcinogenic effects.	7	little more explicit.
8	BY MR. SMITH:	8	Q. Well, let's look at your
9	Q. Again, back to my question.	9	Leavitt testimony Page 133.
10	Chronic inflammation and oxidative stress	10	A. Okay.
11	are two mechanisms that promote tumor and	11	Q. Let's see. Question on
12	cancer development in known carcinogens;	12	Line 8. "Now, you mention there were
13	is that correct?	13	four different kinds, four different
14	MR. FROST: Objection to	14	markers of asbestos, I mean of cancer.
15	form. Asked and answered.	15	And asbestos causes all four of these
16	THE WITNESS: Yeah. I	16	markers to current cells?
17	emphasize that that's known or	17	"Answer: Yes. And this
18	certainly accepted for things such	18	gives you an idea of the different types
19	as asbestos, amphibole types of	19	of things we've studied. It's like the
20	asbestos, as well as cigarette	20	lock, and once that is unlocked, you get
21	smoke.	21	the development of cancer. And here we
22	BY MR. SMITH:	22	see where healthy cells become cancer
23	Q. Oxidants stimulate protein	23	cell and then that the cancer cell
24	pathways that then cause the cell to	24	divides to become a malignant tumor.
	Page 43		Page 45
1	transform and become a tumor, correct?	1	
1	transform and become a filmor correct/		
2		1	"Let me ask you. If you
2	MR. FROST: Objection to	2	only have three of the four markers, will
3	MR. FROST: Objection to form.	2	only have three of the four markers, will you still have a mutation of that cell
3 4	MR. FROST: Objection to form.  THE WITNESS: That's some of	2 3 4	only have three of the four markers, will you still have a mutation of that cell that causes cancer?
3 4 5	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.	2 3 4 5	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have
3 4 5 6	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:	2 3 4 5 6	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need
3 4 5 6 7	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant	2 3 4 5 6 7	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos
3 4 5 6 7 8	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell	2 3 4 5 6 7 8	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell
3 4 5 6 7 8	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an	2 3 4 5 6 7 8	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."
3 4 5 6 7 8 9	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become	2 3 4 5 6 7 8 9	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony
3 4 5 6 7 8 9 10	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes. BY MR. SMITH: Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the	2 3 4 5 6 7 8 9 10 11	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?
3 4 5 6 7 8 9 10 11	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to	2 3 4 5 6 7 8 9 10 11 12	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.
3 4 5 6 7 8 9 10 11 12 13	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein	2 3 4 5 6 7 8 9 10 11 12 13	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these
3 4 5 6 7 8 9 10 11 12 13 14	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and	2 3 4 5 6 7 8 9 10 11 12 13 14	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian
3 4 5 6 7 8 9 10 11 12 13 14	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that	2 3 4 5 6 7 8 9 10 11 12 13 14 15	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?
3 4 5 6 7 8 9 10 11 12 13 14 15	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that correct?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?  A. No, I don't.
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes. BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that correct?  A. That's true in some cases,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?  A. No, I don't.  Q. Of the four-step process you
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that correct?  A. That's true in some cases, yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?  A. No, I don't.  Q. Of the four-step process you said to mesothelioma, and I'm going to
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that correct?  A. That's true in some cases, yes.  Q. And you talked about a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?  A. No, I don't.  Q. Of the four-step process you said to mesothelioma, and I'm going to refer to it like we did in Brower. Is it
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes. BY MR. SMITH: Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that correct?  A. That's true in some cases, yes. Q. And you talked about a four-step process to mesothelioma before,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?  A. No, I don't.  Q. Of the four-step process you said to mesothelioma, and I'm going to refer to it like we did in Brower. Is it okay if I refer to the Shukla study by
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that correct?  A. That's true in some cases, yes.  Q. And you talked about a four-step process to mesothelioma before, Doctor; is that correct, oxidant release,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?  A. No, I don't.  Q. Of the four-step process you said to mesothelioma, and I'm going to refer to it like we did in Brower. Is it okay if I refer to the Shukla study by the first author Shukla, and then
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes. BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that correct?  A. That's true in some cases, yes.  Q. And you talked about a four-step process to mesothelioma before, Doctor; is that correct, oxidant release, protein receptor changes, genome-wide	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?  A. No, I don't.  Q. Of the four-step process you said to mesothelioma, and I'm going to refer to it like we did in Brower. Is it okay if I refer to the Shukla study by the first author Shukla, and then Hillegass by Hillegass? Is that fair?
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. FROST: Objection to form.  THE WITNESS: That's some of the work that we've done, yes.  BY MR. SMITH:  Q. And antioxidant antioxidants are kicked in by a cell after exposure to low doses of an environmental agent as the doses become chronic or at higher concentration, the cells become overwhelmed and not able to correct the imbalance and then protein receptors on the cell are affected and cause the cell to transform; is that correct?  A. That's true in some cases, yes.  Q. And you talked about a four-step process to mesothelioma before, Doctor; is that correct, oxidant release,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	only have three of the four markers, will you still have a mutation of that cell that causes cancer?  "You may, but you won't have the entire process mimicked. So you need all four of these features of asbestos fibers to induce a cell, a healthy cell to become a malignant cell."  Is that truthful testimony and can I rely on that?  A. Yes, that's true.  Q. Do you know which of these steps is necessary to cause ovarian cancer?  A. No, I don't.  Q. Of the four-step process you said to mesothelioma, and I'm going to refer to it like we did in Brower. Is it okay if I refer to the Shukla study by the first author Shukla, and then

	Page 46		Page 48
1		1	
1	you saw gene expression changes with talc	1	it was a transient change of gene
2	compared to neo mesothelial cells,	2	expression changes or not, fair?
3	correct?	3	MR. FROST: Objection to
4	A. Could you repeat that again?	4	form.
5	Q. Sure. In Shukla you saw 30	5	THE WITNESS: Yeah, we we
6	gene expression changes to talc compared	6	did not test asbestos or talc at
7	to neo mesothelial cells at the	7	the highest concentration because
8	75 micrometers per centimeter squared	8	of cell death in the asbestos
9	concentration for eight hours, correct?	9	exposed cultures. That's correct.
10	A. Yes.	10	BY MR. SMITH:
11	Q. And but you never tested	11	Q. So you cannot tell me what
12	talc in that study or in the Hillegass	12	genes were altered or if they were more
13	study that came after it for oxidant	13	altered at the higher concentration at
14	release, correct?	14	24 hours for tale that you saw at the
15	A. Could you repeat that again?	15	higher concentration at eight hours,
16	We've never tested cells for oxidant	16	correct?
17	release?	17	MR. FROST: Objection to
18	Q. In Hillegass, you did a	18	form.
19	bunch of further studies on crocidolite	19	THE WITNESS: We did not,
20	asbestos that you did not do on tale,	20	because they were I cannot tell
21	correct?	21	you that, because we didn't look
22	A. We only did additional	22	at talc for the reasons that I
23	studies where we focused on the proteins	23	just stated.
24	that were increased by asbestos. Many of	24	BY MR. SMITH:
24	that were increased by aspestos. Many of	24	BT WK. SWITH.
	Page 47		Page 49
1	these were not increased by talc.	1	Q. And we'll talk more about
2	Q. Ma'am, that's not my	2	the studies in more detail in a minute.
3	question.	3	In the Shukla study, you saw
4	A. Okay.	4	the gene expression changes at eight
5	Q. My question was, you did not	5	hours at the higher concentration
6	do all of the studies, all of those	6	compared to compared to neo
7	assays and all of the protein	7	mesothelial cells, correct?
8	determination and all of that in	8	MR. FROST: Objection to
9	Hillegass. You did that for crocidolite	9	form.
10	asbestos. You did not do tale in that	10	THE WITNESS: We saw 30
11	study?	11	genes that were increased by
12	MR. FROST: Objection to	12	highest concentrations of talc.
13	form.	13	BY MR. SMITH:
14	THE WITNESS: Yeah, and I	14	Q. But you never tested talc in
15	emphasize we didn't do tale,	15	oxidant release of peritoneal mesothelial
16	because we didn't see that these	16	cells in that study either one of
17	changes were protracted.	17	those studies, correct?
18	BY MR. SMITH:	18	A. That's correct.
		19	
19	Q. Well, ma'am, you did not		Q. And you did not test talc
20	test talc at 24 hours at the higher	20	for protein receptor changes in any of
21	concentration	21	those cells in either one of those
22	MR. FROST: Objection.	22	studies, correct?
23	BY MR. SMITH:	23	A. We did
	1 1 1 1 1		
24	Q so you don't know whether	24	MR. FROST: Objection to

	Page 50		Page 52
1	form.	1	you read that again?
2	THE WITNESS: Yeah, we	2	MR. FROST: Yeah, I was
3	didn't test talc because it didn't	3	going to say, do you mind
4	indicate genes that were increased	4	repeating that one?
5	that were related to oxidative	5	BY MR. SMITH:
6	stress, or the proteins that we	6	Q. Sure.
7	were interested in that were	7	Protein receptors have
8	increased by asbestos.	8	chains that bind to cellular DNA, causing
9	BY MR. SMITH:	9	changes to genes in the DNA to create an
10	Q. You're telling me ATF3 and	10	abnormal cell which can lead to cancer,
11	IL-8 are not associated of mediating	11	correct?
12	inflammatory or oxidative processes in	12	A. That can be one endpoint of
13	the cell?	13	a protein receptor.
14	MR. FROST: Objection to	14	Q. And there's a test for that,
15	form.	15	correct, a test to see which genes are
16	THE WITNESS: ATF3 as we	16	upregulated or downregulated, correct?
17	showed in the in the Shukla	17	A. Genes but not proteins.
18	study is a gene that repairs cells	18	Q. Correct. Cell proliferation
19	from cytokine production.	19	is a hallmark of cancer causing
20	BY MR. SMITH:	20	substances and there are tools to look at
21	Q. Again, you did not test talc	21	cell division and assays to look at
22	for protein receptor changes when applied	22	clumps of cells to see if they survive
23	to peritoneal mesothelial cells in either	23	and become uncontrolled and lead to
24	one of the two studies, correct?	24	cancer; is that correct?
21	one of the two studies, correct:	24	cancer, is that correct?
	Page 51		Page 53
1	A. We didn't test anything for	1	MR. FROST: Objection to
2	protein receptor changes in either of	2	form.
2			101111.
3	those studies. We were interested in	3	THE WITNESS: Yeah, can we
3 4	those studies. We were interested in gene expression.	3 4	
			THE WITNESS: Yeah, can we
4	gene expression.	4	THE WITNESS: Yeah, can we go through that piece by piece?
4 5	gene expression.  Q. And for talc in either one	4 5	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH:
4 5 6	gene expression.  Q. And for talc in either one of those studies regarding peritoneal	4 5 6	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation
4 5 6 7	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for	4 5 6 7	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances?
4 5 6 7 8	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?	4 5 6 7 8	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to
4 5 6 7 8 9	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes	4 5 6 7 8 9	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form.
4 5 6 7 8 9	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell	4 5 6 7 8 9	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of
4 5 6 7 8 9 10	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't	4 5 6 7 8 9 10 11	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't
4 5 6 7 8 9 10 11	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test	4 5 6 7 8 9 10 11	THE WITNESS: Yeah, can we go through that piece by piece?  BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They
4 5 6 7 8 9 10 11 12	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did	4 5 6 7 8 9 10 11 12 13	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly.
4 5 6 7 8 9 10 11 12 13 14	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?	4 5 6 7 8 9 10 11 12 13 14	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly. BY MR. SMITH:
4 5 6 7 8 9 10 11 12 13 14 15	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?  A. No, we didn't see changes that were indicated at the gene level.	4 5 6 7 8 9 10 11 12 13 14 15	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly. BY MR. SMITH: Q. You told me earlier there
4 5 6 7 8 9 10 11 12 13 14 15 16	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?  A. No, we didn't see changes that were indicated at the gene level.  Q. Protein receptors that have	4 5 6 7 8 9 10 11 12 13 14 15 16	THE WITNESS: Yeah, can we go through that piece by piece?  BY MR. SMITH:  Q. Sure. Is cell proliferation a hallmark of cancer-causing substances?  MR. FROST: Objection to form.  THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly.  BY MR. SMITH:  Q. You told me earlier there was a four-step process to mesothelioma, correct, and one of them was cell
4 5 6 7 8 9 10 11 12 13 14 15 16 17	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?  A. No, we didn't see changes that were indicated at the gene level.  Q. Protein receptors that have chains that bind to cellular DNA causing	4 5 6 7 8 9 10 11 12 13 14 15 16 17	THE WITNESS: Yeah, can we go through that piece by piece?  BY MR. SMITH:  Q. Sure. Is cell proliferation a hallmark of cancer-causing substances?  MR. FROST: Objection to form.  THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly.  BY MR. SMITH:  Q. You told me earlier there was a four-step process to mesothelioma, correct, and one of them was cell proliferation; is that right?
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?  A. No, we didn't see changes that were indicated at the gene level.  Q. Protein receptors that have chains that bind to cellular DNA causing changes to genes in the DNA to create	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly. BY MR. SMITH: Q. You told me earlier there was a four-step process to mesothelioma, correct, and one of them was cell proliferation; is that right? A. These are changes that we
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?  A. No, we didn't see changes that were indicated at the gene level.  Q. Protein receptors that have chains that bind to cellular DNA causing changes to genes in the DNA to create abnormal cell cells which can lead to	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly. BY MR. SMITH: Q. You told me earlier there was a four-step process to mesothelioma, correct, and one of them was cell proliferation; is that right? A. These are changes that we have studied called epigenetic, meaning
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?  A. No, we didn't see changes that were indicated at the gene level.  Q. Protein receptors that have chains that bind to cellular DNA causing changes to genes in the DNA to create abnormal cell cells which can lead to cancer; is that correct?	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly. BY MR. SMITH: Q. You told me earlier there was a four-step process to mesothelioma, correct, and one of them was cell proliferation; is that right? A. These are changes that we have studied called epigenetic, meaning that they don't occur at the level of the
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?  A. No, we didn't see changes that were indicated at the gene level.  Q. Protein receptors that have chains that bind to cellular DNA causing changes to genes in the DNA to create abnormal cell cells which can lead to cancer; is that correct?  MR. FROST: Objection to	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	THE WITNESS: Yeah, can we go through that piece by piece?  BY MR. SMITH:  Q. Sure. Is cell proliferation a hallmark of cancer-causing substances?  MR. FROST: Objection to form.  THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly.  BY MR. SMITH:  Q. You told me earlier there was a four-step process to mesothelioma, correct, and one of them was cell proliferation; is that right?  A. These are changes that we have studied called epigenetic, meaning that they don't occur at the level of the DNA. And that's been the focus of our
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	gene expression.  Q. And for talc in either one of those studies regarding peritoneal mesothelial cells, you did not check for cell proliferation, correct?  A. Yes, we did not see genes that were indicative of cell proliferation by talc and we didn't test  Q. Did you test for gene did you test?  A. No, we didn't see changes that were indicated at the gene level.  Q. Protein receptors that have chains that bind to cellular DNA causing changes to genes in the DNA to create abnormal cell cells which can lead to cancer; is that correct?	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	THE WITNESS: Yeah, can we go through that piece by piece? BY MR. SMITH: Q. Sure. Is cell proliferation a hallmark of cancer-causing substances? MR. FROST: Objection to form. THE WITNESS: Not all of them. Some substances don't induce cell proliferation. They act with DNA directly. BY MR. SMITH: Q. You told me earlier there was a four-step process to mesothelioma, correct, and one of them was cell proliferation; is that right? A. These are changes that we have studied called epigenetic, meaning that they don't occur at the level of the

	Page 54		Page 56
1		1	
1	impression that that's the only way that	1	to be one mechanism, whereas some
2	mesothelioma develops. That's what we	2	hereditary cancers or cancers due to
3	focused on.	3	agents that focus on the break of DNA
4	Q. All right. Maybe a better	4	exert their effects."
5	term is cell proliferation is a	5	Can I rely on that answer?
6	characteristic of a cancer-causing	6	A. Yes.
7	substance. Would you agree with that?	7	MR. FROST: Objection to
8	A. No, I wouldn't.	8	form.
9	As I mentioned, there are a	9	BY MR. SMITH:
10	lot of agents that don't induce cell	10	Q. Thank you. You talked about
11	proliferation that cause cancer.	11	ATF3 a minute ago. But ATF3 is a gene,
12	Q. Does does asbestos induce	12	and it's also a transcription factor,
13	cell proliferation or cause it?	13	right?
14	A. It depends upon the type and	14	A. It's a gene, it's a protein,
15	the dose. Again, we've shown that for	15	and it's a transcription factor.
16	crocidolite and amosite asbestos in our	16	Q. And would you agree with me
17	models.	17	that ATF3 is a gene the ATF3 gene is
18	Q. We don't know why some	18	important in combatting inflammation in
19	carcinogens are site-specific in the	19	cells?
20	human body, correct?	20	MR. FROST: Objection to
21	A. That's a broad statement.	21	form.
22	But yes, we know we don't know why	22	THE WITNESS: It depends
23	some agents aren't site specific.	23	upon the cell and the other
24	Q. SNPs or single nucleotide	24	transcription factors. In our
	Q. SIN SOI SINGLE NUCLOCKEE	2.1	transcription factors. In our
	Page 55		Page 57
1	polymorphisms, are mechanisms where some	1	experiments, we showed that it
2	cancers due to exposure to agents can	2	combatted changes by asbestos;
3	cause DNA changes that could lead to	3	that is, it decreased cytokines
4	cancer development, correct?	4	that are associated with
5	MR. FROST: Objection to	5	development of tumors or immune
6	form.	6	response.
7	THE WITNESS: Yes, SNPs are	7	BY MR. SMITH:
8	generally something that occurs in	8	Q. I'm going to ask you, I'm
9	a population of cells. It's very	9	going to read a sentence to you and ask
10	unusual. In fact, I've never seen	10	if you agree with it. "Stress-inducible
11	an agent such as asbestos that	11	transcription factors play a pivotal role
12	induces an SNP.	12	in cellular adaptation to environment, to
13	BY MR. SMITH:	13	maintain homeostasis, and integrity of
14	Q. Can you go to your Brower	14	the genome."
15	deposition, please, ma'am.	15	Would you agree with that
16	Page 87. If you'll go down	16	statement?
17	to Line 13.	17	MR. FROST: Object to form.
/	"Question: What are SNPs or	18	
1 2			And I also object to you reading
18 19	~	10	
19	SNiPs or single nucleotide polymorphisms?	19	her sentences from a document that
19 20	SNiPs or single nucleotide polymorphisms? "Answer: Those are changes	20	you haven't given her.
19 20 21	SNiPs or single nucleotide polymorphisms? "Answer: Those are changes in DNA.	20 21	you haven't given her. Thank you.
19 20 21 22	SNiPs or single nucleotide polymorphisms?  "Answer: Those are changes in DNA.  "Question: And how do they	20 21 22	you haven't given her. Thank you. MR. SMITH: Sure.
19 20 21 22 23	SNiPs or single nucleotide polymorphisms?  "Answer: Those are changes in DNA.  "Question: And how do they influence the development of cancer?	20 21 22 23	you haven't given her. Thank you.
19 20 21 22	SNiPs or single nucleotide polymorphisms?  "Answer: Those are changes in DNA.  "Question: And how do they	20 21 22	you haven't given her. Thank you. MR. SMITH: Sure.

	Page 58		Page 60
1	BY MR. SMITH:	1	emphasized previously, it would depend
2	Q. This is attached as	2	upon the type of cell in terms of the
3	Exhibit 4.	3	effects on that cell type.
4	(Document marked for	4	Q. Would you agree that ATF3 is
5	identification as Exhibit	5	activated in response to oxidative stress
6	Mossman-4.)	6	in a cell?
7	BY MR. SMITH:	7	A. I would have to review that
8	Q. "Systems analysis of ATF3	8	literature. I don't see that statement
9	and stress response in cancer reveals	9	here.
10	opposing effects on pro-apoptotic genes	10	Q. I'm asking you just the
11	in p53 pathway."	11	question.
12	Do you have that in front of	12	A. ATF3 and oxidative stress, I
13	you, Doctor?	13	can't recall specific experiments or cell
14	A. I do.	14	types that oxidants have been added to,
15	Q. I've attached it as	15	such as hydrogen peroxide or those
16	Exhibit 4. The first sentence in the	16	typical to oxidative stress in studies.
16 17		17	Q. IL-8 is a cytokine produced
	blue box under abstract. It says,	18	during inflammation by lymphocytes; is
18	"Stress-inducible transcription factors	19	that correct?
19	play a pivotal role in cellular	20	A. It's one of the effects. It
20	adaptation to environment to maintain	1	
21	homeostasis and integrity in the genome."	21	also can have opposite effects.
22	Would you agree with that?	22	Q. You've done a study on EMPs
23	A. Yes.	23	or elongated mineral particles; is that
24	Q. "Activating transcription	24	correct?
	Page 59		Page 61
1	factor 3, or ATF3, is induced by a	1	A. A study? I have done many
2	variety of stress and inflammatory	2	studies on elongated mineral particles.
3	conditions and is overexposed in many	3	Q. I was thinking of your most
4	kind of cancer cells."	4	recent study. But you have done several
5	Would you agree with that?	5	studies on EMPs, correct?
6	MR. FROST: Objection to	6	A. Elongated mineral particles
7	form. It's overexpressed.	7	including asbestos are have been
8	MR. SMITH: That's what I	8	subject of my research for over 40 years.
9	said.	9	Q. And it can be of any type of
10	MR. FROST: You said	10	mineral with certain dimensions that are
11	overexposed.	11	fibrous in nature that, when in contact
12	BY MR. SMITH:	12	with human cells, can cause adverse
13	Q. Okay. Excuse me. Let me	13	changes including epigenetic changes that
14	read it again. Second sentence.	14	are pathways that can potentially lead to
15	"Activating transcription factor 3, ATF3,	15	carcinogenesis; is that correct?
	is induced by a variety of stress and	16	MR. FROST: Objection to
	is induced by a variety of suess and	1	MIX. I KODI. OUJCHOH W
16	inflammatory conditions and is	17	form
16 17	inflammatory conditions and is	17	form. THE WITNESS: Yeah, can we
16 17 18	overexpressed in many kinds of cancer	18	THE WITNESS: Yeah, can we
16 17 18 19	overexpressed in many kinds of cancer cells."	18 19	THE WITNESS: Yeah, can we pick that statement apart?
16 17 18 19 20	overexpressed in many kinds of cancer cells."  Would you agree with that?	18 19 20	THE WITNESS: Yeah, can we pick that statement apart? BY MR. SMITH:
16 17 18 19 20 21	overexpressed in many kinds of cancer cells."  Would you agree with that?  A. I would agree with the first	18 19 20 21	THE WITNESS: Yeah, can we pick that statement apart? BY MR. SMITH: Q. Sure. Let's go to the
16 17 18 19 20 21	overexpressed in many kinds of cancer cells."  Would you agree with that?  A. I would agree with the first part of that statement.	18 19 20 21 22	THE WITNESS: Yeah, can we pick that statement apart? BY MR. SMITH: Q. Sure. Let's go to the Brower deposition, Page 85.
16 17 18 19 20 21	overexpressed in many kinds of cancer cells."  Would you agree with that?  A. I would agree with the first	18 19 20 21	THE WITNESS: Yeah, can we pick that statement apart? BY MR. SMITH: Q. Sure. Let's go to the

16 (Pages 58 to 61)

	Page 62		Page 64
1	two pages, 85, 86 and 87.	1	do you focus on" well, I think we've
2	"Question: What is an EMP?	2	moved on from EMPs."
3	"An EMP is a very broad term	3	But can I rely on that
4	for elongated mineral particles, and it	4	testimony regarding EMPs?
5	could be referring to anything	5	A. Yes.
6	regardless of whether anything of certain	6	MR. FROST: And I'm just
7	dimensions that are fibrous in nature.	7	going to lodge the same objections
8	It is a term that has been used most	8	that were in the transcript.
9	recently by some regulatory agencies, but	9	BY MR. SMITH:
10	it is very broad in terms of an umbrella	10	Q. And can EMPs can they
11	of materials that fit into this category.	11	cause adverse changes, including
12	"Question: And I note in	12	epigenetic changes that are pathways that
13	your paper that it says EMPs, and you	13	could potentially lead to carcinogenesis?
14	talk about long EMPs greater than 5	14	A. Can EMPs? Certain ones
15	micrometers in length; is that correct?	15	certainly can.
16	"That's a cutoff"	16	Q. Different grades of talc and
17	answer, excuse me.	17	asbestos are different and distinct in
18	"That's a cutoff that's been	18	shape, size, crystallinity and structure;
19	used in terms of fibers that are thought	19	is that correct?
20	to be important in regulation. It's a	20	MR. FROST: Objection to
21	term that is controversial to biologists	21	form. Vague.
22	and chemists.	22	BY MR. SMITH:
23	"Question: Is it true that	23	Q. Let's break it out.
24	by cell's direct contact with EMP, it	24	Different grades of talc are
	Page 63		Page 65
1	causes the cell to react in certain ways?	1	different and distinct in shape, size,
2	"Answer: Direct contact by	2	crystallinity and structure, correct?
3	any material can cause certain changes in	3	MR. FROST: Objection to
4	cells, yes.	4	form, vague.
5	"Question: And cellular	5	THE WITNESS: Yeah, when you
6	reactions to EMP has occurred, would you	6	say grades of talc, I'm a I'm a
7	agree without the EMP binding to any	7	little lost there.
8	cellular receptors or penetrating the	8	BY MR. SMITH:
9	cell itself, correct?	9	Q. Okay. Cosmetic versus
10	"Answer: Could you just	10	industrial. Pharmaceutical versus
11	state that again? I'm sorry.	11	industrial versus cosmetic. Those are
12	"Sure.	12	the grades I'm talking about, my
13	"I missed the first part."	13	definition of grade.
14	Answer.	14	Different grades of talc are
15	Question: Sure. The	15	different and distinct in size, shape,
16	cellular reactions that we just discussed	16	crystallinity and structure; is that
17	to EMPs, they can occur without the EMP	17	correct?
18	binding to any cellular receptors or	18	MR. FROST: Objection to
	penetrating the cell?"	19	form.
19			DILLED CLUTTII
19 20	And your answer was and	20	BY MR. SMITH:
19 20 21	And your answer was and my question was, "Correct?"	21	Q. Or do you know?
19 20 21 22	And your answer was and my question was, "Correct?"  And the answer was, "Yes."	21 22	<ul><li>Q. Or do you know?</li><li>A. Yeah, I in terms of</li></ul>
19 20 21	And your answer was and my question was, "Correct?"	21	Q. Or do you know?

	Page 66		Page 68
1	Q. Different types of asbestos	1	good, I'm getting ready to roll to
2	are different and distinct in shape,	2	a different section. But I'm good
3	size, crystallinity and structure,	3	or whatever. Just so long
4	correct?	4	THE WITNESS: I'm fine.
5	A. That's correct.	5	MR. FROST: I think we can
6	Q. These characteristics may	6	keep going.
7	affect the mineral's reactivity to human	7	MR. SMITH: Okay. Okay.
8	cells and carcinogenic potency; is that	8	All right. Fine.
9	correct?	9	BY MR. SMITH:
10	A. That's correct.	10	Q. I want to talk to you about
11	Q. The type of asbestos and	11	some of your experience, Doctor, as an
12	where it's mined, its shape and size all	12	expert.
13	factor in how it reacts to cells; is that	13	You said you you partly
14	correct?	14	retired since 2014. But you've been
15	A. Yes.	15	testifying in litigation since 2014; is
16	Q. And would the same be of	16	that correct?
17	different grades of talc, or do you know?	17	A. That's correct.
18	MR. FROST: Objection to	18	Q. And approximately 50 to
19	form.	19	75 percent of your professional time is
20	THE WITNESS: I'd have to	20	spent on litigation since 2014; is that
21	study the talc to at different	21	correct?
22	grades, and I'm not sure how	22	A. That's correct.
23	that's separated out.	23	Q. And would this be the vast
24	BY MR. SMITH:	24	majority of your current income since
	Page 67		Page 69
1	Q. And just so we're clear,	1	2014, and that being as an expert
2	you've never studied cosmetic-grade tale;	2	witness?
3	is that right?	3	A. Yes, sir.
4	MR. FROST: Objection. If	4	Q. I noticed from your prior
5	she if she knows.	5	testimony that you attached to your
6	THE WITNESS: I've studied	6	report that you've testified 65 times for
7	industrial tales.	7	defendants in talc litigation over the
8	BY MR. SMITH:	8	past four years; is that correct?
9	Q. So you've never studied	9	A. That includes depositions
10	cosmetic-grade talc; is that correct?	10	and trials in some of the same matters,
11	A. I have not studied cosmetic	11	yes.
12	tales as I know it.	12	Q. You were an employee of
13	Q. Do you understand that	13	Biomedical and Environmental Consultants
14	cosmetic talc is what's in Baby Powder	14	in 1998; is that right?
15 16	and Shower to Shower, which are the	15 16	A. 1998? No.
16 17	products at issue in this case?	17	Q. Do I have the date wrong? I
18	A. Yes, I do.	18	might have I might have written that down wrong.
18 19	Q. Okay. I want to talk to you	19	<u> </u>
20	about your MR SMITH: Do you want to	20	<ul><li>A. That was 30 years ago.</li><li>Q. What dates were you at</li></ul>
21	MR. SMITH: Do you want to take a break for a minute, for a	21	Biomedical and Environmental Consultants?
22	second?	22	A. I worked part-time for them
23	MR. FROST: Do you want to?	23	for a little less than two years. 1988
24	MR. SMITH: I mean, I'm	24	to perhaps 1990.
	1,110, 51,11111, 1111,0111, 1111		rr

vrong.  And you worked there with  Alfred Wehner, right?  A. I never worked with  Dr. Wehner: He was the founder of the group as I understand it.  Mr. FROST: Objection to form.  THE WITNESS: No.  BY MR. SMITH:  A. I know from reading the scientific paper, but I don't know about his relationships with Johnson & Johnson.  Minerals Association; is that correct?  A. Served as an expert.  D. Expert or consultant for the Industrial Minerals Association.  Page 71  A. I have reviewed proposals for frem, yes.  Q. And you weren't corresponding with them and consulting with them. I was — received an assignment through Dr. Wehner's group for correspondence with these individuals. I can't tell you the specific assignment.  It was with someone named in the was also a consultant for Johnson & Johnson.  A. I know from reading the scientific paper, but I don't know about his relationships with Johnson & Johnson.  D. He served — excuse me. You served as an expert for the Industrial Minerals Association; is that correct?  A. Served as an expert.  D. Expert or consultant for the Industrial Minerals Association.  Page 71  A. I have reviewed proposals for them, yes.  Q. And you've served as an expert or consultant for Luzenac; is that correct?  A. Not to my knowledge. As a consultant, and the land of them. I was a recipient of a small with lim.  A. Yes. I wash't a consultant for the Small appare along with I merys and Luzenac employees on the progress report of the Shukha paper along with I men and you've served as an expert for companies for a brief period of time in about 2005.  A. No. I never had a formal apparent with R.T. Vanderbilt.  A. There's plenty of the wash and consulting with them and consulting with them and consulting with them. I was — received an assignment through Dr. Wehner's group for correspondine with R.T. Vanderbilt.  A. I have sa tho consultant for Luzenac; is that correct?  A. I have in litigation.  Q. You weren't corresponding with them and consulting with them. I was — received an expert for consultant for		Page 70		Page 72
And you worked there with Affred Wehner, right? A. I never worked with Dr. Wehner. He was the founder of the group as I understand it. Affred wehner, right? A. I never worked with Be was also a consultant for Johnson & Do. Wehner. He was the founder of the group as I understand it. B. Q. And you also understand that Be was also a consultant for Johnson & Do. MR. FROST: Objection to Di. MR. F	1	Q. I apologize, I wrote it down	1	correspondence, we've gone back through
Alfred Wehner, right? A. I never worked with Dr. Wehner. He was the founder of the group as I understand it. Q. And you also understand that he was also a consultant for Johnson & Johnson in tale issues, correct? MR. FROST: Objection to form. THE WITNESS: No. BY MR. SMITH: Q. You don't know that? A. I know from reading the scientific paper, but I don't know about his his relationships with Johnson & Johnson. Q. He served — excuse me. You served as an expert for the Industrial Minerals Association; is that correct? A. I have reviewed proposals for them, yes. Q. And you've served as an expert or consultant for Luzenac; is that correct? A. Not to my knowledge. As a consulted Luzenac employees on the progress report of the Shukla paper along with the IMA? A. Yes, I wasn't a consultant for the nadout of time in about 2005. Q. And you weren't correct as an expert for companies for a brief period of time in about 2005. Q. And you've served as an expert for companies for a brief period of time in about 2005. Q. Ano, I never had a formal 223 arrangement with R.T. Vanderbilt, correct? A. No. I never had a formal 223 arrangement with R.T. Vanderbilt, correct with R.T. Vanderbilt, correctnored as weight of Johnson & Q. And you are currently serving as an expert for Johnson & Johnson and have in the past; is that correct? A. I have for a little over a  R.T. Vanderbilt, correctnore through Dr. Wehner's group for corresponding with the mand consulting with the mand c	2	1 0	2	
4 Alfred Wehner, right? 5 A. I never worked with 6 Dr. Wehner. He was the founder of the 7 group as I understand it. 8 Q. And you also understand that 9 he was also a consultant for Johnson & 10 Johnson in tale issues, correct? 11 MR. FROST: Objection to 12 form. 12 form. 13 THE WITNESS: No. 14 BY MR. SMITH: 15 Q. You don't know that? 16 A. I know from reading the 17 scientific paper, but I don't know about 18 his relationships with Johnson & 19 Q. He served excuse me. You 20 served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association.  Page 71  A. I have reviewed proposals 6 A. Not to my knowledge. As a correct? 8 consultant, no, I don't think I've consult	3		3	R.T. Vanderbilt, you weren't
5 A. I never worked with 6 Dr. Wehner. He was the founder of the 7 group as I understand it. 8 Q. And you also understand that 9 he was also a consultant for Johnson & 10 Johnson in tale issues, correct? 11 MR. FROST: Objection to 12 form. 12 form. 13 THE WITNESS: No. 14 BY MR. SMITH: 15 Q. You don't know that? 16 A. I know from reading the 17 scientific paper, but I don't know about 18 his relationships with Johnson & Johnson. 19 Q. He served excuse me. You 10 served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association. 24 A. I have reviewed proposals 25 for them, yes. 26 Q. And you've served as an 27 expert or consultant for Luzenace; is that 28 correct? 29 A. Not to my knowledge. As a 29 consulted Luzenac. 30 Q. You weren't corresponding 31 with the IMA? 32 A. Yes. I wasn't a consultant 33 A. Yes. I wasn't a consultant 44 for them. I was a recipient of a small 55 grant from something called EUROTALC that 36 may have included Luzenac and other 37 companies for a brief period of time in 38 about 2005. 39 Q. And you've served as an 30 expert or consultant for R.T. Vanderbilt, 31 a. No. I never had a formal 32 cerpert or consultant for R.T. Vanderbilt, 32 right? 33 P. C. That's incorrect? 44 Industrial for the shakla paper along 39 pine in the J980s, and one in the 1990s, 30 pine in the Grense of asbestos 31 pine in the J980s, and one in the 1990s, 31 pine in the J980s, and one in the 1990s, 32 pine in the J980s, and one in the 1990s, 33 pine in the Grense of asbestos 34 possible in the J990s, 35 pine in the J990s, 36 pine in the J990s, 37 pine in the J990s, 38 pine in the J990s, 39 pine in the J990s, 30 pine in the J990s, 31 pine in the J990s, 32 pine in the J990s, 33 pine in the J990s, 34 pine in the J990s, 35 pine in the J990s, 36 pine in the J990s, 37 pine in the J990s, 38 pine in the J990s, 39 pine in the J990s, 30 pine in	4	Alfred Wehner, right?	4	
7 group as I understand it. 8 Q. And you also understand that 9 he was also a consultant for Johnson & 10 Johnson in tale issues, correct? 11 MR. FROST: Objection to 12 form. 13 THE WITNESS: No. 14 BY MR. SMITH: 15 Q. You don't know that? 16 A. I know from reading the 17 scientific paper, but I don't know about 18 his relationships with Johnson & Johnson. 19 Q. He served excuse me. You 20 served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association. 25 Page 71 26 A. I have reviewed proposals 27 for them, yes. 28 Q. And you've served as an 29 expert or consultant for Luzenac; is that 20 consultant, no, I don't think I've 30 consulted Luzenac. 31 Q. You served as an expert on a scientific about 2005. 32 Q. You served as an expert on a scientific adject, but his for them. I was a recipient of a small progress report of the Shukla paper along with there, I was a recipient of a small for them. I was a recipient of a small grant from something called EUROTALC that may have included Luzenae and other companies for a brief period of time in about 2005. 31 Q. And you've served as an expert or consultant for R.T. Vanderbilt, right? 32 A. No. I never had a formal arrangement with R.T. Vanderbilt, 23 many conserved as an expert or expert or consultant for R.T. Vanderbilt, 23 many conserved as an expert or explicit than whether you served as an expert or explicit than whether you served as an expert or explicit than whether you served as an expert or explicit than whether you served as an expert or expert or consulted than the progress and expert or explicit than whether you served as an expert or explicit than whether you served as an expert or explicit than whether you served as an expert or explicit than whether you served as an expert or explicit than whether you served as an expert or explicit than whether you served as an expert or explicit than whether you served as an expert or explicit than whethe	5	A. I never worked with	5	
8 Page 71  1 A. I have reviewed proposals for them, yes. 2 Q. And you've served as an expert. 2 A. I have reviewed proposals for them, yes. 3 Q. And you've served as an expert or consultant no, I don't think I've consulted Luzenae. 4 A. Not to my knowledge. As a consultant, no, I don't think I've consulted Luzenae. 5 Q. You weren't corresponding with them? about 2005. 6 Q. You weren't corresponding with them? about 2005. 7 Q. And you've served as an expert for companies for a brief period of time in about 2005. 8 Page 71 Companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for explicit than whether you served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for explicit than whether you served as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as an expert for explicit than whether you served as an expert or consultant for R.T. Vanderbilt. 9 Q. Can you go to Page 45 of the Brower testimony, please. 9 Q. You weren't corresponding with first products, correct:  9 Q. You yerved as an expert for companies for a brief period of time in about 2005. 9 Q. And you've served as a	6	Dr. Wehner. He was the founder of the	6	A. I was not consulting with
9   he was also a consultant for Johnson & Johnson in tale issues, correct?   10   MR. FROST: Objection to   11   MR. FROST: Objection to   12   form.   12   Johnson & Johnson and have in the past; is that correct?   21   Served as an expert for the Industrial Minerals Association.   24   A. I have reviewed proposals   1   Johnson and have in the past; is that correct?   23   Q. And you've served as an expert for Gornell & A. I have reviewed proposals   1   Johnson and have in the past; is that correct?   A. I have for a little over a   Page 73   A. I have for a little over a   Page 73   A. I have for a little over a   Page 74   A. That's incorrect. I   Served — I went to one meeting there in   10   Johnson & Johnson and have in the past; is that correct?   A. I have for a little over a   Page 73   A. I have for a little over a   Page 74   A. That's incorrect. I   Served — I went to one meeting there in   10   Johnson &	7	group as I understand it.	7	them. I was received an assignment
10	8	Q. And you also understand that	8	through Dr. Wehner's group for
11 MR. FROST: Objection to form. 12 form. 13 THE WITNESS: No. 14 BY MR. SMITH: 15 Q. You don't know that? 16 A. I know from reading the 17 scientific paper, but I don't know about 18 his relationships with Johnson & Johnson. 19 Q. He served excuse me. You 20 served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association. 24 Page 71  1 A. I have reviewed proposals 2 for them, yes. 3 Q. And you've served as an expert or donsultant for Luzenac; is that 4 expert or consultant for Luzenac; is that 5 correct? 6 A. Not to my knowledge. As a consultant, no. I don't think I've 8 consulted Luzenac employees on the progress report of the Shukla paper along 10 with ther IMA? 11 A. Yes. I wasn't a consultant for grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005. 19 Q. And you've served as an expert for Donnson that passes that produce or sold as severed or consultant for R.T. Vanderbilt, 23 Inanghement with R.T. Vanderbilt. 21 grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005. 22 A. No. I never had a formal arrangement with R.T. Vanderbilt. 23 arrangement with R.T. Vanderbilt. 24 Industrial Minerals and expert or consultant to the passes and expert or consultant to the passes and expert or description of a small approaches or a brief period of time in about 2005. 23 arrangement with R.T. Vanderbilt. 24 Industrial Minerals and ther consultant with R.T. Vanderbilt. 25 Industrial hypienist. 26 A. He was an employee, yes. 27 A. Thave initigation. 28 Q. You served as an expert for Donnan and have in the past; is that correct? 29 A. I have for a little over a  29 Page 71  20 Page 71  21 Fage 72  22 A. That's incorrect. I served — I went to one meeting there in 19 — in the 1980s, and one in the 1990s, neither of which concerned Owens Corning and litigation. 29	9	he was also a consultant for Johnson &	9	correspondence with these individuals. I
12 form. 13 THE WITNESS: No. 14 BY MR. SMITH: 15 Q. You don't know that? 16 A. I know from reading the 17 scientific paper, but I don't know about 18 his relationships with Johnson & Johnson. 19 Q. He served excuse me. You 20 served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association.  Page 71  A. I have reviewed proposals 2 for them, yes. 2 for them, yes. 3 Q. And you've served as an 4 expert or consultant for Luzenac; is that 5 correct? 6 A. Not to my knowledge. As a 6 consulted Luzenac. 7 consultant, no, I don't think I've 8 consulted Luzenac. 9 Q. You weren't corresponding 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 right? 22 A. No. I never had a formal 22 arrangement with R.T. Vanderbilt. 23 Johns Kelse who was their industrial hygienist. Q. And he was an employee of R.T. Vanderbilt, correct? A. He was an employee, yes. Q. You served as an expert for Cyprus Minerals, is that correct? A. I have in litigation. Q. And you are currently serving as an expert for Johnson & Johnson ad have in the past; is that correct? A. I have for a little over a  Page 73  year now, yes. Q. You served as an expert on a scientific advisory board for Owens Corning in the defense of asbestos litigation in the 1980s and 1990s; is that correct? A. That's incorrect. I served — I went to one meeting there in 19 — in the 1980s, and one in the 1990s, neither of which concerned Owens Corning and litigation. Q. Can you go to Page 45 of the Brower testimony, please. Question, Line I, on Page 45.  "In need to be more explicit than whether you served as an expert or	10	Johnson in talc issues, correct?	10	can't tell you the specific assignment.
THE WITNESS: No.  14 BY MR. SMITH:  15 Q. You don't know that?  16 A. I know from reading the  17 scientific paper, but I don't know about  18 his relationships with Johnson & Johnson.  19 Q. He served excuse me. You  20 served as an expert for the Industrial  21 Minerals Association; is that correct?  22 A. Served as an expert.  23 Q. Expert or consultant for the  24 Industrial Minerals Association.  Page 71  1 A. I have reviewed proposals  2 for them, yes.  3 Q. And you've served as an  4 expert or consultant for Luzenac; is that  5 correct?  6 A. Not to my knowledge. As a  7 consultant, no, I don't think I've  8 consulted Luzenac  9 Q. You weren't corresponding  with Imerys and Luzenac employees on the  progress report of the Shukla paper along  with Imerys and Euzenac and other  for them. I was a recipient of a small  14 grant from something called EUROTALC that  may have included Luzenac and other  companies for a brief period of time in  about 2005.  Q. And I have as an employee of  R.T. Vanderbilt, correct?  A. He was an employee, yes.  Q. You served as an expert for  Cyprus Minerals, is that correct?  A. I have in litigation.  Q. And you are currently  serving as an expert for Johnson &  Johnson and have in the past; is that  correct?  A. I have for a little over a  Page 73  Page 73  Page 73  Page 73  A. I have for a little over a  Page 74  A. I have for a little over a  Page 75  A. I have for a little over a  Page 76  A. I have for a little over a  Page 77  A. I have for a little over a  Page 78  A. I have for a little over a  Page 79  Page	11	MR. FROST: Objection to	11	It was with someone named
14 BY MR. SMITH: 15 Q. You don't know that? 16 A. I know from reading the 16 A. I know from reading the 17 scientific paper, but I don't know about 18 his relationships with Johnson & Johnson. 19 Q. He served excuse me. You 20 served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association. 25 For them, yes. 26 G. And you've served as an expert or a scientific advisory board for Owens 27 Corring in the defense of asbestos litigation in the 1980s and 1990s; is that correct? 28 consultant, no, I don't think I've 29 consultant, no, I don't think I've 30 correct? 31 A. Yes. I wasn't a consultant 32 for them, yes, and Luzenac employees on the progress report of the Shukla paper along with he IMA? 31 A. Yes. I wasn't a consultant 32 for them, was a recipient of a small grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005. 31 Q. And you've served as an expert for companies for a brief period of time in about 2005. 32 A. No. I never had a formal arrangement with R.T. Vanderbilt. 33 A. No. I never had a formal arrangement with R.T. Vanderbilt. 34 A. No. I never had a formal arrangement with R.T. Vanderbilt.	12	form.	12	John Kelse who was their industrial
15 Q. You don't know that? 16 A. I know from reading the 17 scientific paper, but I don't know about 18 his relationships with Johnson & Johnson. 19 Q. He served excuse me. You 20 served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association. 25 For them, yes. 26 Industrial Minerals Association. 27 Page 71  18 A. I have reviewed proposals 28 for them, yes. 29 G. And you've served as an expert or consultant for the sexpert or consultant for Luzenac; is that expert or consultant for Luzenac. 29 Q. You served as an expert on a scientific advisory board for Owens Corning in the defense of asbestos litigation in the 1980s and 1990s; is that correct? 30 Q. You weren't corresponding 40 Q. You weren't corresponding 41 progress report of the Shukla paper along 42 with the IMA? 43 Q. You served as an expert for Johnson & Serving as an expert for Johnson & Serving as an expert for Johnson and have in the past; is that correct? 44 A. I have for a little over a  45 Page 73  46 Page 74  47 Page 73  48 Page 74  49 Page 73  40 Page 73  41 Page 73  42 Page 74  43 Page 74  44 Page 74  45 Page 74  46 Page 75  47 Page 76  48 Page 79  49 Page 79  40 Page 79  41 Page 73  42 Page 70  42 Page 70  43 Page 70  44 Page 70  45 Page 70  46 Page 70  47 Page 70  48 Page 70  49 Page 70  40 Page 70  41 Page 70  42 Page 70  43 Page 70  44 Page 70  45 Page 70  46 Page 70  47 Page 70  48 Page 70  49 Page 70  40 Page 70  41 Page 70  42 Page 70  42 Page 70  43 Page 70  44 Page 70  45 Page 70  46 Page 70  47 Page 70  48 Page 70  49 Page 70  40 Page 70  41 Page 70  42 Page 70  43 Page 70  44 Page 70  45 Page 70  46 Page 70  47 Page 70  48 Page 70  49 Page 70  40 Page 70  41 Page 70  42 Page 70  43 Page 70  44 Page 70  45 Page 70  46 Page 70  47 Page 70  48 Page 70  49 Page 70  40 Page 70  41 Page 70  42 Page 7	13	THE WITNESS: No.	13	hygienist.
A. I know from reading the scientific paper, but I don't know about his relationships with Johnson & Johnson.  Q. He served excuse me. You price for the Industrial served as an expert for the Industrial progress report of the Shukla paper along with Imerys and Luzenac employees on the progress report of the Shukla paper along with Imerys and Luzenac and other companies for a brief period of time in about 2005.  A. I know from reading the scientific paper, but I don't know about 17	14	BY MR. SMITH:	14	Q. And he was an employee of
17   Scientific paper, but I don't know about his relationships with Johnson & Johnson.   18   Cyprus Minerals; is that correct?   19   A. I have in litigation.   20   Served as an expert for the Industrial   20   Q. And you are currently   21   Serving as an expert for Johnson & Johnson and have in the past; is that   22   Correct?   22   A. Served as an expert.   22   Johnson and have in the past; is that   23   Correct?   24   A. I have for a little over a   24   A. I have for a little over a   25   Johnson and have in the past; is that   26   Correct?   A. I have for a little over a   26   A. I have for a little over a   27   A. I have for a little over a   28   Serving as an expert for Johnson & Johnson and have in the past; is that   27   Correct?   A. I have for a little over a   28   Serving as an expert for Johnson & Johnson and have in the past; is that   28   Correct?   A. I have for a little over a   29   You served as an expert on a   29   Serving as an expert for Johnson & Johnson and have in the past; is that   29   Correct?   A. I have for a little over a   29   You served as an expert on a   20   Serving as an expert for Johnson & Johnson and have in the past; is that   20   Correct?   A. I have for a little over a   20   You served as an expert on a   20   Serving as an expert for Johnson and have in the past; is that   20   Correct?   A. I have for a little over a   20   You served as an expert on a   20   Serving as an expert for Johnson and have in the past; is that   20   Correct?   A. That's incorrect?   A. That's incorrect   20   Serving as an expert for Johnson and lave in the past; is that   20   Correct?   A. That's incorrect?   A. That's incorrect   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert	15	Q. You don't know that?	15	R.T. Vanderbilt, correct?
17   Scientific paper, but I don't know about his relationships with Johnson & Johnson.   18   Cyprus Minerals; is that correct?   19   A. I have in litigation.   20   Served as an expert for the Industrial   20   Q. And you are currently   21   Serving as an expert for Johnson & Johnson and have in the past; is that   22   Correct?   22   A. Served as an expert.   22   Johnson and have in the past; is that   23   Correct?   24   A. I have for a little over a   24   A. I have for a little over a   25   Johnson and have in the past; is that   26   Correct?   A. I have for a little over a   26   A. I have for a little over a   27   A. I have for a little over a   28   Serving as an expert for Johnson & Johnson and have in the past; is that   27   Correct?   A. I have for a little over a   28   Serving as an expert for Johnson & Johnson and have in the past; is that   28   Correct?   A. I have for a little over a   29   You served as an expert on a   29   Serving as an expert for Johnson & Johnson and have in the past; is that   29   Correct?   A. I have for a little over a   29   You served as an expert on a   20   Serving as an expert for Johnson & Johnson and have in the past; is that   20   Correct?   A. I have for a little over a   20   You served as an expert on a   20   Serving as an expert for Johnson and have in the past; is that   20   Correct?   A. I have for a little over a   20   You served as an expert on a   20   Serving as an expert for Johnson and have in the past; is that   20   Correct?   A. That's incorrect?   A. That's incorrect   20   Serving as an expert for Johnson and lave in the past; is that   20   Correct?   A. That's incorrect?   A. That's incorrect   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert or one meeting there in   20   Serving as an expert	16	A. I know from reading the	16	A. He was an employee, yes.
20 Served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association.  25 Page 71  26 A. I have for a little over a  27 Page 73  28 Page 74  29 Page 75  20 Page 76  Page 77  Page 78  Page 79  Page	17		17	
20 served as an expert for the Industrial 21 Minerals Association; is that correct? 22 A. Served as an expert. 23 Q. Expert or consultant for the 24 Industrial Minerals Association.  Page 71  Page 73  A. I have reviewed proposals 2 for them, yes. 2 Q. And you've served as an 4 expert or consultant for Luzenac; is that 5 correct? 4 A. Not to my knowledge. As a 5 consulted Luzenac. 6 A. Not to my knowledge. As a 7 consulted Luzenac. 9 Q. You werent corresponding 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 right? 22 A. No. I never had a formal 23 grant from something called EUROTALC 24 A. I have for a little over a 25 Johnson and have in the past; is that 26 correct? 27 A. I have for a little over a 28 scientific advisory board for Owens 29 C. You served as an expert on a 30 scientific advisory board for Owens 4 Coming in the defense of asbestos 5 litigation in the 1980s and 1990s; is 6 that correct? 7 A. That's incorrect. I 8 served I went to one meeting there in 9 19 in the 1980s, and one in the 1990s, 10 neither of which concerned Owens Corning 11 and litigation. 12 Q. Can you go to Page 45 of the 13 Brower testimony, please. 14 Question, Line 1, on Page 15 "Okay. Well, you've 16 consulted with or served as an expert for 17 consulted with or served as an expert for 29 consulted with or served as an expert for 20 consulted with or served as an expert for 20 consulted with or served as an expert for 21 consulted with or served as an expert for 22 and you've served as an expert for explicit 23 arrangement with R.T. Vanderbilt. 24 Tineed to be more explicit 25 than whether you served as an expert or	18	his relationships with Johnson & Johnson.	18	Cyprus Minerals; is that correct?
Minerals Association; is that correct?  A. Served as an expert.  Q. Expert or consultant for the lindustrial Minerals Association.  Page 71  A. I have reviewed proposals or for them, yes.  Q. And you've served as an expert or a scientific advisory board for Owens or the consultant, no, I don't think I've consulted Luzenac.  Q. You weren't corresponding or with Imerys and Luzenac employees on the progress report of the Shukla paper along with the IMA?  A. Yes. I wasn't a consultant for a small grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005.  Q. And you've served as an expert or a little over a  Page 73  A. I have for a little over a  Page 74  A. I have for a little over a  Page 75  Page 75  A. I have for a little over a  Page 75  Page 76  A. I have for a little over a  Page 75  Page 75  Page 75  A. I have for a little over a  Page 75  Page 75  Page 75  Page 76  A. I have for a little over a  Page 75  Page 75  Page 75  A. I have for a little over a  Page 75  Page 75  A. I have for a little over a  Page 75  Page 75  Page 75  A. I have for a little over a  Page 75  Page 75  A. I have for a little over a  Page 75  Page 75  A. I have for a little over a  Page 75  A. I have for a little over a  Page 75  A. I have for a little over a	19	Q. He served excuse me. You	19	A. I have in litigation.
A. Served as an expert.  Q. Expert or consultant for the Industrial Minerals Association.  Page 71  A. I have reviewed proposals for them, yes.  Q. And you've served as an expert or consultant for Luzenac; is that correct?  A. Not to my knowledge. As a expert or consultant, no, I don't think I've consulted Luzenac.  Q. You weren't corresponding  Q. You weren't corresponding  progress report of the Shukla paper along with the IMA?  A. Yes. I wasn't a consultant for Brown and have in the past; is that correct?  A. That's incorred as an expert on a scientific advisory board for Owens  Corning in the defense of asbestos litigation in the 1980s and 1990s; is that correct?  A. That's incorrect. I served — I went to one meeting there in 19 — in the 1980s, and one in the 1990s, neither of which concerned Owens Corning and litigation.  A. Yes. I wasn't a consultant 13 Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Can you go to Page 45 of the Brower testimony, please.  Q. Washing the defense of asbestos litigation in the 1980s, and one in the 1990s, neither of which concerned Owens Corning and litigation.  Q. Can you go to Page 45 of the Grower testimony, please.  "A.	20	served as an expert for the Industrial	20	Q. And you are currently
Q. Expert or consultant for the Industrial Minerals Association.  Page 71  A. I have reviewed proposals for them, yes. Q. And you've served as an expert on a scientific advisory board for Owens expert or consultant for Luzenac; is that expert or consultant for Luzenac; is that correct? A. Not to my knowledge. As a consulted Luzenac. A. Not to my knowledge. As a consulted Luzenac. Q. You served as an expert on a scientific advisory board for Owens that correct? A. That's incorrect. I served — I went to one meeting there in progress report of the Shukla paper along with the IMA? A. Yes. I wasn't a consultant progress report of the Shukla paper along with the IMA? A. Yes. I wasn't a consultant for them. I was a recipient of a small grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005. Q. And you've served as an expert or consultant for R.T. Vanderbilt, right? A. No. I never had a formal arrangement with R.T. Vanderbilt.  Page 73  A. I have for a little over a  Page 73  A. I have for a little over a  Page 73  A. I have for a little over a  Page 73  A. I have for a little over a  Page 73  A. I have for a little over a  Page 73  A. I have for a little over a  Page 73  A. I have for a little over a  Page 73  A. I have for a little over a  Page 73  A. That's incorrect. I  A. That's incorrect. I  Served — I went to one meeting there in neither of which concerned Owens Corning and litigation.  Page 75  A. That's incorrect. I  Berved — I went to one meeting there in neither of which concerned Owens Corning and litigation.  Page 75  A. That's incorrect. I  A. That's incorrect. I  Berved — I went to one meeting there in neither of which concerned Owens Corning and litigation.  Page 75  A. That's incorrect. I  Berved — I went to one meeting there in neither of which concerned Owens Corning and litigation.  Page 75  A. That's incorrect. I  Corning in the 1980s and 1990s; is that cornect?  A. That's incorrect. I  Corning in the 1980s and 1990s; is that	21	Minerals Association; is that correct?	21	serving as an expert for Johnson &
Page 71  A. I have reviewed proposals for them, yes. Q. And you've served as an expert or consultant for Luzenac; is that consultant, no, I don't think I've consulted Luzenac. Q. You weren't corresponding progress report of the Shukla paper along with the IMA? A. Yes. I wasn't a consultant for them. I was a recipient of a small for them. I was a recipient of a small companies for a brief period of time in about 2005. Q. And you've served as an  Page 73  A. I have for a little over a  Page 73  A. I have for a little over a  A. Out of owens  A. That's incorrect. I  Served I went to one meeting there in  19 in the 1980s, and one in the 1990s, neither of which concerned Owens Corning and litigation.  Q. Can you go to Page 45 of the  Brower testimony, please.  Question, Line 1, on Page  45.  "Okay. Well, you've  consulted with or served as an expert for companies that produce or sold  asbestos-containing products, correct:  "Answer: Could you be more  expert or consultant for R.T. Vanderbilt,  right?  A. No. I never had a formal  22  "I need to be more explicit  than whether you served as an expert or	22	A. Served as an expert.	22	Johnson and have in the past; is that
Page 71  A. I have reviewed proposals for them, yes.  Q. And you've served as an expert or consultant for Luzenac; is that correct?  A. Not to my knowledge. As a consultant, no, I don't think I've consulted Luzenac.  Q. You weren't corresponding with Imerys and Luzenac employees on the progress report of the Shukla paper along with the IMA?  A. Yes. I wasn't a consultant for them. I was a recipient of a small grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005.  Q. And you've served as an expert or a since period of time in about 2005.  A. No. I never had a formal arrangement with R.T. Vanderbilt.  Page 73  year now, yes. Q. You served as an expert on a scientific advisory board for Owens Corning in the defense of asbestos litigation in the 1980s and 1990s; is that correct?  A. Not Inever had a formal general view of the Shukla paper along and litigation. Q. Can you go to Page 45 of the Brower testimony, please. Question, Line 1, on Page 45.  "Okay. Well, you've consulted with or served as an expert for companies that produce or sold asbestos-containing products, correct: "Answer: Could you be more explicit?  "I need to be more explicit than whether you served as an expert or	23	Q. Expert or consultant for the	23	correct?
1 A. I have reviewed proposals 2 for them, yes. 2 Q. You served as an expert on a 3 Q. And you've served as an 4 expert or consultant for Luzenac; is that 5 correct? 6 A. Not to my knowledge. As a 6 consultant, no, I don't think I've 7 Consulted Luzenac. 8 consulted Luzenac. 9 Q. You served as an expert on a 8 scientific advisory board for Owens 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 right? 22 A. No. I never had a formal 23 arrangement with R.T. Vanderbilt. 24 Corning in the defense of asbestos 26 Corning in the defense of asbestos 27 Corning in the defense of asbestos 28 cientific advisory board for Owens 29 Corning in the defense of asbestos 29 Corning in the defense of asbestos 20 corning in the defense of asbestos 20 Corning in the defense of asbestos 20 Litigation in the 1980s and 1990s; is 20 Can that correct? 21 right? 22 A. No. I never had a formal 23 defense of as an expert or a scientific advisory board for Owens 24 Pouncient of a small and itigation in the 1980s and 1990s; is 25 that correct? 26 A. That's incorrect. I 27 A. That's incorrect. I 28 Served I went to one meeting there in 29 (20 Can you go to Page 45 of the 29 Pouncient of which concerned Owens Corning 20 Can you go to Page 45 of the 20 Can you go to Page 45 of the 21 "Okay. Well, you've 22 consulted with or served as an expert for companies that produce or sold 29 asbestos-containing products, correct: 20 "Answer: Could you be more explicit? 21 "I need to be more explicit than whether you served as an expert or	24	Industrial Minerals Association.	24	A. I have for a little over a
2 for them, yes. 3 Q. And you've served as an 4 expert or consultant for Luzenac; is that 5 correct? 5 Litigation in the 1980s and 1990s; is 6 A. Not to my knowledge. As a 7 consultant, no, I don't think I've 8 consulted Luzenac. 9 Q. You weren't corresponding 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 right? 22 A. No. I never had a formal 23 scientific advisory board for Owens 24 Corning in the defense of asbestos 25 correct; 4 Corning in the defense of asbestos 26 litigation in the 1980s, and 1990s; is 26 that correct?  A. That's incorrect. I 26 served I went to one meeting there in 27 and litigation. 28 served I went to one meeting there in 29 19 in the 1980s, and one in the 1990s, neither of which concerned Owens Corning 29 and litigation. 20 Can you go to Page 45 of the 21 Brower testimony, please. 21 (Vokay. Well, you've) 22 (Conyou go to Page 45 of the 23 abestos-containing products, correct: 24 (Solution) 25 (Conyou go to Page 45 of the 26 (Conyou go to Page 45 of the 27 (Conyou go to Page 45 of the 28 (Conyou go to Page 45 of the 29 (Conyou go to Page 45 of the 29 (Conyou go to Page 45 of the 20 (Conyou go to Page 45 of the 20 (Conyou go to Page 45 of the 20 (Conyou go to Page 45 of the 21 (Conyou go to Page 45 of the 22 (Conyou go to Page 45 of the 23 (Conyou go to Page 45 of the 29 (Conyou go to Page 45 of the 20 (Conyou go to Page 45 of the 20 (Conyou go to Page 45 of the 21 (Conyou go to Page 45 of the 21 (Conyou go to Page 45 of the 22 (Conyou go to Page 45 of the 23 (Conyou go to Page 45 of the 24 (Conyou go to Page 45 of the 25 (Conyou go to Page 45 of the 26 (Conyou go to Page 45 of the 27 (Conyou go to Page 45 of the 28 (Conyou go to		Page 71		Page 73
Q. And you've served as an expert or consultant for Luzenac; is that correct?  A. Not to my knowledge. As a consultant, no, I don't think I've consulted Luzenac.  Q. You weren't corresponding progress report of the Shukla paper along with the IMA?  A. Yes. I wasn't a consultant for them. I was a recipient of a small may have included Luzenac and other companies for a brief period of time in about 2005.  Q. And you've served as an expert or consultant for R.T. Vanderbilt, expert or consultant strangement with R.T. Vanderbilt.  Scientific advisory board for Owens Corning in the defense of asbestos litigation in the 1980s and 1990s; is that correct?  A. That's incorrect. I served I went to one meeting there in 19 in the 1980s, and one in the 1990s, neither of which concerned Owens Corning and litigation.  Q. Can you go to Page 45 of the Brower testimony, please. Question, Line 1, on Page 45.  "Okay. Well, you've consulted with or served as an expert for companies that produce or sold asbestos-containing products, correct:  "Answer: Could you be more explicit?  "I need to be more explicit than whether you served as an expert or	1	A. I have reviewed proposals	1	year now, yes.
4 expert or consultant for Luzenac; is that 5 correct? 6 A. Not to my knowledge. As a 6 that correct? 7 consultant, no, I don't think I've 8 consulted Luzenac. 9 Q. You weren't corresponding 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 right? 22 A. No. I never had a formal 23 arrangement with R.T. Vanderbilt. 24 Corning in the defense of asbestos 1 litigation in the 1980s and 1990s; is 4 that correct? A. That's incorrect. I 8 served I went to one meeting there in 19 19 in the 1980s, and one in the 1990s, neither of which concerned Owens Corning 10 and litigation. 11 and litigation. 12 Q. Can you go to Page 45 of the 13 Brower testimony, please. 14 Question, Line 1, on Page 15 "Okay. Well, you've 16 companies that produce or sold 17 consulted with or served as an expert for 18 asbestos-containing products, correct: 20 expert or consultant for R.T. Vanderbilt, 21 right? 22 A. No. I never had a formal 23 url need to be more explicit 24 than whether you served as an expert or	2	for them, yes.	2	Q. You served as an expert on a
5 correct? 6 A. Not to my knowledge. As a 7 consultant, no, I don't think I've 8 consulted Luzenac. 9 Q. You weren't corresponding 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 arrangement with R.T. Vanderbilt. 22 Ilitigation in the 1980s and 1990s; is 4 that correct?  A. That's incorrect. I 8 served I went to one meeting there in 9 19 in the 1980s, and one in the 1990s, neither of which concerned Owens Corning and litigation. 10 neither of which concerned Owens Corning 11 and litigation. 12 Q. Can you go to Page 45 of the 13 Brower testimony, please. 14 Question, Line 1, on Page 15 "Okay. Well, you've 16 consulted with or served as an expert for 17 consulted with or served as an expert for 18 about 2005. 19 Q. And you've served as an 19 asbestos-containing products, correct: 20 "Answer: Could you be more 21 right? 22 A. No. I never had a formal 23 "I need to be more explicit 24 than whether you served as an expert or	3	Q. And you've served as an	3	scientific advisory board for Owens
6 A. Not to my knowledge. As a 7 consultant, no, I don't think I've 8 consulted Luzenac. 9 Q. You weren't corresponding 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 right? 22 A. No. I never had a formal 23 arrangement with R.T. Vanderbilt. 26 Served I went to one meeting there in 27 A. That's incorrect. 28 served I went to one meeting there in 29 19 in the 1980s, and one in the 1990s, 20 neither of which concerned Owens Corning 21 and litigation. 20 Page 45 of the 21 Brower testimony, please. 24 Question, Line 1, on Page 25 "Okay. Well, you've 26 consulted with or served as an expert for 27 companies that produce or sold 28 asbestos-containing products, correct: 29 "Answer: Could you be more explicit? 20 "I need to be more explicit 21 than whether you served as an expert or	4	expert or consultant for Luzenac; is that	4	Corning in the defense of asbestos
consultant, no, I don't think I've  consulted Luzenac.  Q. You weren't corresponding  progress report of the Shukla paper along  with the IMA?  A. That's incorrect. I  served I went to one meeting there in  10 neither of which concerned Owens Corning  and litigation.  Q. Can you go to Page 45 of the  Brower testimony, please.  A. Yes. I wasn't a consultant  for them. I was a recipient of a small  grant from something called EUROTALC that  may have included Luzenac and other  companies for a brief period of time in  about 2005.  Q. And you've served as an  Question, Line 1, on Page  "Okay. Well, you've  consulted with or served as an expert for  companies that produce or sold  asbestos-containing products, correct:  "Answer: Could you be more  expert or consultant for R.T. Vanderbilt,  A. No. I never had a formal  22 "I need to be more explicit  than whether you served as an expert or	5	correct?	5	litigation in the 1980s and 1990s; is
8 consulted Luzenac. 9 Q. You weren't corresponding 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 expert or consultant for R.T. Vanderbilt. 22 A. No. I never had a formal 23 arrangement with R.T. Vanderbilt. 28 served I went to one meeting there in 19 19 in the 1980s, and one in the 1990s, 10 neither of which concerned Owens Corning and litigation. 20 Q. Can you go to Page 45 of the 21 Brower testimony, please. 24 Question, Line 1, on Page 25 (Consulted with or served as an expert for consulted with or served as an expert for companies that produce or sold asbestos-containing products, correct: 20 "Answer: Could you be more explicit? 21 right? 22 Ti need to be more explicit than whether you served as an expert or	6	A. Not to my knowledge. As a	6	that correct?
9 Q. You weren't corresponding 10 with Imerys and Luzenac employees on the 11 progress report of the Shukla paper along 12 with the IMA? 13 A. Yes. I wasn't a consultant 14 for them. I was a recipient of a small 15 grant from something called EUROTALC that 16 may have included Luzenac and other 17 companies for a brief period of time in 18 about 2005. 19 Q. And you've served as an 20 expert or consultant for R.T. Vanderbilt, 21 right? 22 A. No. I never had a formal 23 neither of which concerned Owens Corning 26 and litigation. 27 Q. Can you go to Page 45 of the 28 Brower testimony, please. 29 Question, Line 1, on Page 20 "Okay. Well, you've 20 consulted with or served as an expert for 20 asbestos-containing products, correct: 20 "Answer: Could you be more 21 right? 22 A. No. I never had a formal 23 arrangement with R.T. Vanderbilt. 24 The 1980s, and one in the 1990s, 20 neither of which concerned Owens Corning 21 and litigation. 20 Q. Can you go to Page 45 of the 21 Brower testimony, please. 24 Question, Line 1, on Page 25 "Okay. Well, you've 26 consulted with or served as an expert for 27 consulted with or served as an expert for 28 asbestos-containing products, correct: 29 "Answer: Could you be more 20 explicit? 21 explicit? 22 "I need to be more explicit 23 than whether you served as an expert or	7	consultant, no, I don't think I've	7	A. That's incorrect. I
with Imerys and Luzenac employees on the progress report of the Shukla paper along with the IMA?  A. Yes. I wasn't a consultant for them. I was a recipient of a small grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005.  Q. Can you go to Page 45 of the Brower testimony, please. Question, Line 1, on Page 45.  "Okay. Well, you've consulted with or served as an expert for companies that produce or sold asbestos-containing products, correct: expert or consultant for R.T. Vanderbilt, right?  A. No. I never had a formal arrangement with R.T. Vanderbilt.  "In need to be more explicit than whether you served as an expert or	8	consulted Luzenac.	8	<del>_</del>
progress report of the Shukla paper along with the IMA?  A. Yes. I wasn't a consultant for them. I was a recipient of a small grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005.  Q. Can you go to Page 45 of the Brower testimony, please. Question, Line 1, on Page 45.  "Okay. Well, you've consulted with or served as an expert for consulted with or served as an expert for companies that produce or sold asbestos-containing products, correct:  Q. And you've served as an expert or consultant for R.T. Vanderbilt,  right?  A. No. I never had a formal and litigation. Q. Can you go to Page 45 of the Brower testimony, please.  Vuestion, Line 1, on Page 45.  "Okay. Well, you've consulted with or served as an expert for about 2005.  Ranswer: Could you be more explicit?  "Answer: Could you be more explicit?  "I need to be more explicit than whether you served as an expert or	9	· · · · · · · · · · · · · · · · · · ·	9	
with the IMA?  A. Yes. I wasn't a consultant  for them. I was a recipient of a small  grant from something called EUROTALC that  may have included Luzenac and other  companies for a brief period of time in  about 2005.  Q. And you've served as an  expert or consultant for R.T. Vanderbilt,  right?  20 Can you go to Page 45 of the  Brower testimony, please.  Question, Line 1, on Page  45.  "Okay. Well, you've  consulted with or served as an expert for  consulted with or served as an expert for  companies that produce or sold  asbestos-containing products, correct:  "Answer: Could you be more  explicit?  "I need to be more explicit  than whether you served as an expert or	10		10	•
A. Yes. I wasn't a consultant for them. I was a recipient of a small grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005.  Q. And you've served as an expert or consultant for R.T. Vanderbilt, expert or consultant for R.T. Vanderbilt,  A. No. I never had a formal arrangement with R.T. Vanderbilt.  Brower testimony, please. Question, Line 1, on Page 45.  "Okay. Well, you've consulted with or served as an expert for consulted with or served as an expert for about 2005.  Romanies that produce or sold asbestos-containing products, correct: "Answer: Could you be more explicit?  "I need to be more explicit than whether you served as an expert or			I	
for them. I was a recipient of a small grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005.  Q. And you've served as an expert or consultant for R.T. Vanderbilt, expert or consultant for R.T. Vanderbilt,  A. No. I never had a formal arrangement with R.T. Vanderbilt.  14 Question, Line 1, on Page 45.  "Okay. Well, you've consulted with or served as an expert for consulted with or served as an expert for companies that produce or sold asbestos-containing products, correct: "Answer: Could you be more explicit?  "I need to be more explicit than whether you served as an expert or			1	
grant from something called EUROTALC that may have included Luzenac and other companies for a brief period of time in about 2005.  Q. And you've served as an expert or consultant for R.T. Vanderbilt, expert or consultant for R.T. Vanderbilt,  right?  A. No. I never had a formal arrangement with R.T. Vanderbilt.  15 45.  "Okay. Well, you've consulted with or served as an expert for companies that produce or sold asbestos-containing products, correct:  "Answer: Could you be more explicit?  "I need to be more explicit than whether you served as an expert or			1	• • •
may have included Luzenac and other  companies for a brief period of time in  about 2005.  Q. And you've served as an  expert or consultant for R.T. Vanderbilt,  right?  A. No. I never had a formal  arrangement with R.T. Vanderbilt.  16 "Okay. Well, you've  consulted with or served as an expert for  companies that produce or sold  asbestos-containing products, correct:  20 "Answer: Could you be more  explicit?  21 explicit?  22 "I need to be more explicit  than whether you served as an expert or		<u> •</u>	I	
companies for a brief period of time in about 2005.  Q. And you've served as an expert or consultant for R.T. Vanderbilt, right?  A. No. I never had a formal arrangement with R.T. Vanderbilt.  17 consulted with or served as an expert for companies that produce or sold asbestos-containing products, correct: "Answer: Could you be more explicit?  21 explicit? 22 "I need to be more explicit than whether you served as an expert or			1	
about 2005.  Q. And you've served as an  expert or consultant for R.T. Vanderbilt,  right?  A. No. I never had a formal  arrangement with R.T. Vanderbilt.  21 companies that produce or sold  asbestos-containing products, correct:  20 "Answer: Could you be more  explicit?  21 explicit?  22 "I need to be more explicit  than whether you served as an expert or		•	I	
Q. And you've served as an 19 asbestos-containing products, correct: 20 expert or consultant for R.T. Vanderbilt, 20 "Answer: Could you be more 21 right? 21 explicit? 22 A. No. I never had a formal 22 "I need to be more explicit 23 arrangement with R.T. Vanderbilt. 23 than whether you served as an expert or			1	•
expert or consultant for R.T. Vanderbilt, 20 "Answer: Could you be more 21 right? 21 explicit? 22 A. No. I never had a formal 22 "I need to be more explicit 23 arrangement with R.T. Vanderbilt. 23 than whether you served as an expert or			1	•
right? 21 explicit? 22 A. No. I never had a formal 22 "I need to be more explicit 23 arrangement with R.T. Vanderbilt. 23 than whether you served as an expert or			I	= =
A. No. I never had a formal 22 "I need to be more explicit 23 arrangement with R.T. Vanderbilt. 23 than whether you served as an expert or	20	•	1	
23 arrangement with R.T. Vanderbilt. 23 than whether you served as an expert or		mi cala 40	21	explicit?
1				HT 1
Q. There's plenty of 24 consulted with companies that produced	22	A. No. I never had a formal	I	
	22 23	A. No. I never had a formal arrangement with R.T. Vanderbilt.	23	than whether you served as an expert or

	Page 74		Page 76
1	products that contained asbestos?	1	much are you what are you billing for
2	"Answer: The only company	2	your time here today?
3	that I had a relationship with, and it	3	A. \$550 an hour.
4	wasn't a long-standing relationship, was	4	Q. Is that the same billing
5	that I agreed to be on the scientific	5	rate that you would have for trial,
6	advisory board, I think, once in the	6	deposition? Do you differentiate?
7	1980s and once in the 1990s, with other	7	A. Yes. It would be the same
8	scientists and review inhouse research by	8	rate.
9	Owens Corning."	9	Q. When is the next time that
10	Is that testimony true?	10	you're scheduled to testify at trial?
11	A. Yes. That's what I just	11	A. I'm testifying in the Olson
12	stated.	12	trial in New York at the latter part of
13	Q. Okay. Thank you.	13	this week.
14	You also served as an expert	14	Q. What about after that?
15	for the tobacco industry in the 1980s; is	15	MR. FROST: Objection.
16	that correct?	16	THE WITNESS: I don't have
17	MR. FROST: Objection to	17	any trial dates on my calendar.
18	form.	18	BY MR. SMITH:
19	THE WITNESS: I had one	19	Q. Earlier we had talked about,
20	assignment, approximately 30 years	20	you talked about your work with the
21	ago, through Dr. Wehners' company.	21	tobacco industry. I want to attach as an
22	BY MR. SMITH:	22	exhibit, which is Exhibit I'll hand
23	Q. And since 2014 you have	23	you a copy, Doctor.
24	was the answer to my question yes?	24	(Document marked for
	Page 75		Page 77
1	A. You'll have to state it	1	identification as Exhibit
2	again, sir.	2	Mossman-5.)
3	Q. You have served as an expert	3	BY MR. SMITH:
4	and consultant for the tobacco industry	4	Q. I'll attach this as
5	in the 1980s; is that correct?		
		5	Exhibit 5. This is a January 12, 1990,
6	MR. FROST: Same objection.	5 6	Exhibit 5. This is a January 12, 1990, letter to Mr. Junius McElveen, Esquire.
6 7			•
	MR. FROST: Same objection.	6	letter to Mr. Junius McElveen, Esquire.
7	MR. FROST: Same objection. THE WITNESS: Yeah I had one	6 7	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc
7 8	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a	6 7 8	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.
7 8 9	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH:	6 7 8 9	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner. Are you familiar with this
7 8 9 10	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry.	6 7 8 9 10	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?
7 8 9 10 11	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH:	6 7 8 9 10 11	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am.
7 8 9 10 11 12	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served	6 7 8 9 10 11 12	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am. Q. At the beginning you say,
7 8 9 10 11 12 13	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that	6 7 8 9 10 11 12 13	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am. Q. At the beginning you say, "Dear Mr. McElveen, you requested our
7 8 9 10 11 12 13 14	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that manufacture and sell talc-based products; is that correct? A. That's correct.	6 7 8 9 10 11 12 13 14	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am. Q. At the beginning you say, "Dear Mr. McElveen, you requested our meeting last week that Mr. Nims" "a
7 8 9 10 11 12 13 14 15	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that manufacture and sell talc-based products; is that correct?	6 7 8 9 10 11 12 13 14 15	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am. Q. At the beginning you say, "Dear Mr. McElveen, you requested our meeting last week that Mr. Nims" "a brief summary of" excuse me. "You
7 8 9 10 11 12 13 14 15	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that manufacture and sell talc-based products; is that correct? A. That's correct.	6 7 8 9 10 11 12 13 14 15 16	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am. Q. At the beginning you say, "Dear Mr. McElveen, you requested our meeting last week that Mr. Nims" "a brief summary of" excuse me. "You requested at our meeting last week with
7 8 9 10 11 12 13 14 15 16 17	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that manufacture and sell talc-based products; is that correct? A. That's correct. Q. And that will continue today	6 7 8 9 10 11 12 13 14 15 16 17	letter to Mr. Junius McElveen, Esquire. It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am. Q. At the beginning you say, "Dear Mr. McElveen, you requested our meeting last week that Mr. Nims" "a brief summary of" excuse me. "You requested at our meeting last week with Mr. Nims a brief summary of my literature
7 8 9 10 11 12 13 14 15 16 17	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that manufacture and sell talc-based products; is that correct? A. That's correct. Q. And that will continue today and into the foreseeable future; is that	6 7 8 9 10 11 12 13 14 15 16 17	letter to Mr. Junius McElveen, Esquire.  It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am.  Q. At the beginning you say, "Dear Mr. McElveen, you requested our meeting last week that Mr. Nims" "a brief summary of" excuse me. "You requested at our meeting last week with Mr. Nims a brief summary of my literature search to date on cellular and molecular
7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that manufacture and sell talc-based products; is that correct? A. That's correct. Q. And that will continue today and into the foreseeable future; is that correct?	6 7 8 9 10 11 12 13 14 15 16 17 18	letter to Mr. Junius McElveen, Esquire.  It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am.  Q. At the beginning you say, "Dear Mr. McElveen, you requested our meeting last week that Mr. Nims" "a brief summary of" excuse me. "You requested at our meeting last week with Mr. Nims a brief summary of my literature search to date on cellular and molecular mechanisms of carcinogenesis.
7 8 9 10 11 12 13 14 15 16 17 18 19 20	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that manufacture and sell talc-based products; is that correct? A. That's correct. Q. And that will continue today and into the foreseeable future; is that correct? MR. FROST: Objection to	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	letter to Mr. Junius McElveen, Esquire.  It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am.  Q. At the beginning you say,  "Dear Mr. McElveen, you requested our meeting last week that Mr. Nims" "a brief summary of" excuse me. "You requested at our meeting last week with Mr. Nims a brief summary of my literature search to date on cellular and molecular mechanisms of carcinogenesis.  "I specifically looked for
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. FROST: Same objection. THE WITNESS: Yeah I had one assignment where I did a literature search for a lawyer representing the tobacco industry. BY MR. SMITH: Q. Since 2014, you have served as an expert on behalf of companies that manufacture and sell talc-based products; is that correct? A. That's correct. Q. And that will continue today and into the foreseeable future; is that correct? MR. FROST: Objection to form.	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	letter to Mr. Junius McElveen, Esquire.  It looks like it's from you. And it's cc to Alfred Wehner.  Are you familiar with this document?  A. I am.  Q. At the beginning you say,  "Dear Mr. McElveen, you requested our meeting last week that Mr. Nims" "a brief summary of" excuse me. "You requested at our meeting last week with Mr. Nims a brief summary of my literature search to date on cellular and molecular mechanisms of carcinogenesis.  "I specifically looked for recent research data to substantiate the

	Page 78		Page 80
1	events in the development of tumors	1	Owens Corning Fiberglass Corporation,
2	during their relatively long latency	2	Granville technical center, Granville,
3	period in man."	3	Ohio.
4	Is that what you were was	4	And it says, "Dear John."
5	that that was the task that you were	5	And you understand, as you reference in
6	doing?	6	this, that that Owens Corning was
7	A. The task that I was doing	7	producing asbestos-containing materials;
8	was to do a search on the molecular	8	is that correct?
9	biology of lung cancers.	9	A. No, not at this time point.
10	Q. And the statement that I	10	I was never aware of this in the 1980s.
11	just read, is that correct? Is that what	11	Q. So when you write in the
12	your task was? Is that what you were	12	paragraph, final paragraph, "Please find
13	doing?	13	enclosed a brief critique of the recent
14	A. I'm not sure what cigarette	14	PNAS covered in the New York Times. I
15	smoking prior to 1966 was relevant to,	15	cannot help but surmise that Dr. Selikoff
16	but I think the question he was asking me	16	was responsible for the press release.
17	were, do components of cigarette smoke	17	Regardless, the possibility that asbestos
18	have properties that start or influence	18	binds and introduces malignant and
19	the development of cancers.	19	foreign DNA into normal cells of the lung
20	Q. And but this is your	20	seems highly unlikely."
21	you wrote this letter, correct?	21	You didn't understand that
22	A. I did.	22	the issue of asbestos and Owens Corning
23	Q. Okay. And on the last	23	was relevant to the company?
24	paragraph of the letter, before your	24	A. No. Dr. Hadley was a
	Page 79		Page 81
1	signature, it says, "I will continue to	1	colleague that I met at a scientific
1 2	signature, it says, "I will continue to survey new journals in the field as well	1 2	colleague that I met at a scientific meeting. He was responsible for the
2	survey new journals in the field as well	2	meeting. He was responsible for the
2	survey new journals in the field as well as Index Medica searches on 'genes and	2 3	meeting. He was responsible for the development of fiberglasses at their
2 3 4	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an	2 3 4	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who
2 3 4 5	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when	2 3 4 5	meeting. He was responsible for the development of fiberglasses at their technical center.
2 3 4 5 6	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."	2 3 4 5 6	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was
2 3 4 5 6 7	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to	2 3 4 5 6 7	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on
2 3 4 5 6 7 8	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?	2 3 4 5 6 7 8	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells
2 3 4 5 6 7 8 9	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report	2 3 4 5 6 7 8	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come
2 3 4 5 6 7 8 9	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no	2 3 4 5 6 7 8 9	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training.
2 3 4 5 6 7 8 9 10	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical	2 3 4 5 6 7 8 9 10 11	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to
2 3 4 5 6 7 8 9 10 11 12	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.	2 3 4 5 6 7 8 9 10 11 12	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off.
2 3 4 5 6 7 8 9 10 11 12 13	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is	2 3 4 5 6 7 8 9 10 11 12 13	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off. A. I'm sorry. By training,
2 3 4 5 6 7 8 9 10 11 12 13 14	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is Exhibit 6 to the deposition another	2 3 4 5 6 7 8 9 10 11 12 13 14	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off. A. I'm sorry. By training, John was someone I actually met when he
2 3 4 5 6 7 8 9 10 11 12 13 14 15	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is Exhibit 6 to the deposition another letter from you. And we talked about	2 3 4 5 6 7 8 9 10 11 12 13 14	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off. A. I'm sorry. By training, John was someone I actually met when he was getting his degree earlier at Duke
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is Exhibit 6 to the deposition another letter from you. And we talked about Owens Corning just a minute ago. Do you	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off. A. I'm sorry. By training, John was someone I actually met when he was getting his degree earlier at Duke University.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is Exhibit 6 to the deposition another letter from you. And we talked about Owens Corning just a minute ago. Do you recall that, Doctor?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off.  A. I'm sorry. By training, John was someone I actually met when he was getting his degree earlier at Duke University.  Q. Did you come to learn that
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is Exhibit 6 to the deposition another letter from you. And we talked about Owens Corning just a minute ago. Do you recall that, Doctor?  A. Yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off. A. I'm sorry. By training, John was someone I actually met when he was getting his degree earlier at Duke University.  Q. Did you come to learn that as Owens Corning produced
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is Exhibit 6 to the deposition another letter from you. And we talked about Owens Corning just a minute ago. Do you recall that, Doctor?  A. Yes.  (Document marked for	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off.  A. I'm sorry. By training, John was someone I actually met when he was getting his degree earlier at Duke University.  Q. Did you come to learn that as Owens Corning produced asbestos-containing products?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is Exhibit 6 to the deposition another letter from you. And we talked about Owens Corning just a minute ago. Do you recall that, Doctor?  A. Yes.  (Document marked for identification as Exhibit	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off. A. I'm sorry. By training, John was someone I actually met when he was getting his degree earlier at Duke University.  Q. Did you come to learn that as Owens Corning produced asbestos-containing products?  A. I came to learn that after I
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	survey new journals in the field as well as Index Medica searches on 'genes and lung cancer.' Please let me know when you would like to meet again for an update."  And then did you continue to do what you said you would do?  A. No. I wrote a final report after meeting these individuals and no longer was a consultant for Biomedical and Environmental Consulting.  Q. I'm going to attach what is Exhibit 6 to the deposition another letter from you. And we talked about Owens Corning just a minute ago. Do you recall that, Doctor?  A. Yes.  (Document marked for identification as Exhibit Mossman-6.)	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	meeting. He was responsible for the development of fiberglasses at their technical center.  He was also a scientist who attended meetings on asbestos and was interested in the effects of asbestos on cells  Q. Did you come A by training. Q. I'm sorry. I didn't mean to cut you off. A. I'm sorry. By training, John was someone I actually met when he was getting his degree earlier at Duke University.  Q. Did you come to learn that as Owens Corning produced asbestos-containing products?  A. I came to learn that after I heard about their bankruptcy. I was

	Page 82		Page 84
1	A. TASSC?	1	this is an article entitled,
2	Q. Mm-hmm.	2	"Constructing 'Sound Science' and 'Good
3	A. I don't know what that is,	3	Epidemiology': Tobacco, Lawyers and
4	and I don't think I've ever paid	4	Public" "and the Public Relations
5	membership dues or I would remember.	5	Firms."
6	MR. SMITH: Can you hand	6	And it's an article in the
7	that to the witness.	7	American Journal of Public Health from
8	(Document marked for	8	November of 2001. It's a peer-reviewed
9	identification as Exhibit	9	article. And it's by lead author Ong.
10	Mossman-7.)	10	And it goes down, and if you
11	BY MR. SMITH:	11	look on the front page, Doctor, it says,
12	Q. I'm going to attach a	12	"Philip Morris' 'Sound Science'
13	partial listing of key scientists and	13	organization in the United States"?
14	I don't know if I can pronounce this	14	Says, "PM," Philip Morris,
15	academicians supporting the advancement	15	"began its 'sound science' program in
16	of sound science coalition. You don't	16	1993 to stimulate criticism of the 1992
17	recall this? TASSC?	17	U.S. Environmental Protection Agency
18	A. No, I don't think I'm	18	(EPA) report, which identified secondhand
19	just looking at some of the people here,	19	smoke as a Group A human carcinogen.
20	who are include scientists from	20	Ellen Merlo (vice president, PM Corporate
21	different spheres including Bruce Ames.	21	Affairs) wrote to William Campbell
22	So no, I am not aware that this is a	22	(chairman at PM" or Philip Morris
23	society that I ever joined, no.	23	"USA)."
24	Q. So if you go and it's in	24	Then it goes on to the go
	Page 83		Page 85
1	alphabetical order. And on Page 9,	1	to the right paragraph, "In February of
2	looking at the top, there's your name.	2	1993, Philip Morris, PM, and its public
3	Dr. Brooke T. Mossman, professor of	3	relations firm, APCO Associates, worked
4	pathology, College of Medicine,	4	to launch a 'sound science' coalition in
5	University of Vermont, Burlington,	5	the United States with approximately
6	Vermont. Is that you?	6	320,000 budgeted for the first 24 weeks.
7	A. That's me.	7	Three months later, The Advancement For
8	Q. And you are listed on the	8	Sound Science Coalition, or TASSC, has
9	partial listing of key scientists and	9	been formed. TASSC described itself as a
10	academicians butchering that name	10	'a not-for-profit coalition advocating
11	supporting the advancement of sound	11	the use of sound science in public policy
12	science coalition, TASSC. Do you see	12	decisionmaking' even though APCO created
13	that, Doctor?	13	it to help Philip Morris fight smoking
14	A. Yes, I have no idea what	14	restrictions. TASSC's public positioning
15	that is. Sorry.	15	and media campaign were designed to
16	Q. Well, maybe we can put some	16	minimize its connections with the tobacco
17	context to it here today.	17	industry. TASSC's member survey
18	MR. SMITH: Thank you.	18	mentioned only secondhand smoke among a
19	(Document marked for	19	list of other potential examples of
20	identification as Exhibit	20	'unsound, incomplete or unsubstantiated
0.1	Mossman-8.)	21	science."
21	DILLED CLUTTEL	22	
22	BY MR. SMITH:		
	Q. I'm going to attach the next numbered exhibit which is Number 8. And	23 24	Were you familiar with all of this, Doctor, and have you seen this

article before?  A. Thaven't seen the article, but let me emphasize that I've never been a amember by consent of TASSC, and there's no reason that tobacco would have wanted me to be a member, as all my published in pect-reviewed high-impact scientific journals on asbestos, fibers, tale, and cleavage fragments have been published and peer-reviewed, high-impact statement would on be the same after your involvement in tale litigation in 2014?  Page 87  A. When you say — when you say it would — Q. Your research being published in pect-reviewed, high-impact scientific journals prior to the vent. A. Let me emphasize that I'm not doing original research anymore on tale or asbestos fibers. So that statement would not be relevant. Q. Okay. Fair enough. I want to look at your CV for a second. A. Okay. Q. And I've got an extra copy for you. Several actually. MR. FROST: Objection, form.  BY MR. SMITH: Q. Okay. You mentioned all of your research as best — you mentioned all of your research as best — you mentioned all of your research as best — you mentioned all of your participation in tale litigation in 2014. And that's listed in your report.  Page 87  Page 87  Page 89  Page		Daga 96		
A. I haven't seen the article,  but let me emphasize that I've never been 4 a member by consent of TASSC, and there's 5 no reason that tobacco would have wanted 6 me to be a member, as all my publications 7 list tobacco smoke as the Number I cause 8 of lung disease or lung cancers. 9 Q. Well, you - you haven't 10 published any articles on secondhand 11 smoke, have you? 12 MR. FROST: Objection, form. 13 BY MR. SMITH: 14 Q. Have you? 15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of 17 your research as best - you mentioned 18 all of your research an sebstos, talc 19 and cleavage fragments have been 20 published and peer-reviewed, high-impact 21 advent of your participation in talc 22 advent of your participation 23 it it would - 24 your participation in talc 25 it it would - 26 Your research being 27 published in peer-reviewed high-impact 28 of lung disease or lung cancers. 7 A. Let me emphasize that I'm 10 not doing original research anymore on 11 to look at your CV for a second. 8 A. Let me emphasize that I'm 11 not doing original research anymore on 12 to look at your CV for a second. 14 Q. Okay. Fair enough. I want 15 MR. FROST: Is this the CV 16 MR. FROST: Is this the CV 17 that was attached to the report? 18 MR. SMITH: It is. 19 (Document marked for 19 involvement in tale litigation. Would 19 that be correct? 10 A. Yes. 11 Do you recall saying that? 12 A. I'm not sure what you're 13 A. Okay. 14 Q. All right. Now, you've 15 gotdo you have your CV in front of 16 metore or abests of the control of the devent of your participation in talc 19 litigation in 2014? 20 A. Yes. 21 Q. That was confusing. 22 All right in your report you 23 mentioned that your research on asbestos 16 fibers, tale, and cleavage fragments have 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 litigation in 2014? 21 A. Yes. 22 Q. You agreed with that. 23 A. Okay. 24 Jour research been published and peer-reviewed 25 Jour research been published and pe	_	Page 86		Page 88
but let me emphasize that I've never been a nember by consent of TASSC, and there's no reason that tobacco would have wanted me to be a member, as all my publications list tobacco smoke as the Number I cause of lung disease or lung cancers. 9 Q. Well, you – you haven't published any articles on secondhand smoke, have you? 12 MR. FROST: Objection, form. 13 BY MR. SMITH: 13 A. Okay. 14 Q. Have you? 15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of your research as best – you mentioned all of all of your research as best – you mentioned 21 seitniff journals prior to the event – advent of your participation in tale that that would be the same after your involvement in tale litigation in 2014. And that's listed in population in tale that that would be the same after your report.  3 Do you reparts it. 4 Q. You agreed with that. 4 Q. Wour research being published in peer-reviewed high-impact scientific journals prior to the event – advent of your participation in tale that that would be case after your involvement in tale litigation in 2014?  4 Do you recall saying that? 5 Do you recall saying that? 6 Do you recall saying that? 7 A. Tran not sure what you're asking. 9 Q. Let me rephrase. Let me rephrase it. 11 A. Okay. 12 Q. That was confusing. 13 You – in your report you mentioned that your research on asbestos fibers, tale and cleavage fragments have been published and peer-reviewed been published and peer-reviewed ligh-impact scientific journals prior to the event of your participation in tale litigation in 2014? 15 Do you agreed with that. 16 Do you recall saying that? 17 Do you feel saying that? 18 Do you feel saying that? 29 A. Tran to sure what you're asking. 29 Q. Let me rephrase. Let me rephrase it. 21 A. Okay. 22 A. No, it's refereed. Is that – should be referred manuscripts? 23 Do you agreed with that. 24 You agreed with that. 25 Do you agreed with that. 26 D. Well, then 1 – I'm learning something new everyday. 27 A. Yes. 28 Q. You agreed with that. 29 Q. Hold on. I'm getting ahead of the same af				
a member by consent of TASSC, and there's no reason that tobacco would have wanted me to be a member, as all my publications list tobacco smoke as the Number I cause of lung disease or lung cancers.  9 Q. Well, you – you haven't published any articles on secondhand smoke, have you?  10 published any articles on secondhand smoke, have you?  11 MR. FROST: Objection, form.  12 MR. SMITH: 0, Okay, Fair enough, I want to look at your CV for a second.  13 BY MR. SMITH: 13 A. Okay.  14 Q. Have you?  15 A. Secondhand smoke, no. 16 Q. Okay, You mentioned all of your research on asbestos, talc all of your research on asbestos, talc scientific journals prior to the event scientific journals prior to the event fatt that would be the same after your that that would be the same after your in your report to mentioned that your research on asbestos, fighting.  1 Do you recall saying that?  2 A. Yes.  3 Q. I'll assume that would mean that that would be the same after your research on asbestos, fighting.  1 Do you recall saying that?  2 A. Yes.  3 Q. I'll assume that would mean that that would be the same after your resport on a second that your resport.  1 Do you recall saying that?  2 A. I do. Q. Okay. And I would like to go to Page 15.  1 Do you recarch on asbestos, fighting.  2 A. I do. Q. Okay. And I would like to go to Page 15.  3 Won — in your report you mentioned that your research on asbestos, fighting.  4 The provided assume that would mean that that would be the same after your in your report you mentioned that your research on asbestos, fighting.  3 You — in your report you mentioned that your research on asbestos, fighting.  4 Will be referred. It says referred. Is that — should it be referred. It says referred. Is that — should it be referred. It says referred. Is that — should it be referred. It says referred. Is that — should it be referred. It says referred. Is that — should it be referred. It says referred. Is say referred. It says referred. Is should it be referred. It says referred. Is should it be referred.		· · · · · · · · · · · · · · · · · · ·		
5 mo reason that tobacco would have wanted me to be a member, as all my publications 7 list tobacco smoke as the Number 1 cause of lung disease or lung cancers. 9 Q. Well, you – you haven't 10 published any articles on secondhand 11 smoke, have you? 12 MR. FROST: Objection, form. 13 MR. FROST: Objection, form. 14 Q. Have you? 15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of 17 your research on asbestos, tale 18 all of your research on asbestos, tale 19 published and per-reviewed, high-impact scientific journals prior to the vant 4 that that would be the same after your involvement in tale litigation in 2014. A Okay. 12 Q. Draw as confusing. 13 You – in your report would give the advent of your participation in tale litigation in 2014 and that your report in the advent of your participation in tale 19 litigation in 2014. And that's listed in 20 Q. Let me rephrase it. 11 A. Okay. 20 That was confusing. 21 Q. That was confusing. 22 Q. That was confusing. 23 Q. That was confusing. 24 MR. SMITH: 11 A. Okay. 25 Page 89  10 C. A. I'm not sure what you're 25 asking. 30 Q. Let me rephrase. Let me 26 published and peer-reviewed 16 been published and peer-reviewe		<u> </u>		
me to be a member, as all my publications list tobacco smoke as the Number I cause of fung disease or lung cancers.  9 Q. Well, you – you haven't published any articles on secondhand smoke, have you?  11 Smoke, have you?  12 MR. FROST: Objection, form. 13 BY MR. SMITH: 13 A. Okay. 14 Q. Have you? 15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of your research as best – you mentioned all of your research on asbestos, tale all of your research on asbestos, tale all of your research on asbestos, tale and cleavage fragments.  A. Let me emphasize that I'm ot doing original research amy mymore on tale or asbestos fibers. So that statement would not be relevant. Q. Okay. Fair enough. I want to look at your CV for a second. A. Okay. Q. And I've got an extra copy for you. Several actually. MR. SMITH: It is. (Document marked for identification as Exhibit Mossman-9.) BY MR. SMITH: It is. (Document marked for identification as Exhibit Mossman-9.) BY MR. SMITH: Do you recall saying that? A. Yes. Q. Il assume that would mean that that would be the same after your involvement in tale litigation. Would that that would be the same after your asking. Q. Let me rephrase. Let me rephrase it. A. Okay. Q. And I've got an extra copy for you. Several actually. MR. SMITH: It is. (Document marked for identification as Exhibit Mossman-9.) BY MR. SMITH: Do you recall saying that? A. Yes. A. Yes. A. Yes. A. Yes. BY MR. SMITH: MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9. BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9. BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9. BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9. BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9. BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9. BY MR. SMITH: I'm going to referred. It says refereed. Is that — should it be referred manuscripts? A. No. Q. Is		· · · · · · · · · · · · · · · · · · ·		
State to bacco smoke as the Number I cause of lung disease or lung cancers.   8   O. Well, you — you haven't   9   tale or absests of bars. So that   10   published any articles on secondhand   10   smoke, have you?   11   Q. Okay. Fair enough. I want   12   MR. FROST: Objection, form.   12   to look at your CV for a second.   13   BY MR. SMITH:   13   A. Okay.   Q. And I've got an extra copy   15   A. Secondhand smoke, no.   15   for you. Several actually.   16   MR. FROST: Is this the CV   17   your research as best — you mentioned   16   MR. FROST: Is this the CV   that was attached to the report?   18   do your research on absestos, tale   18   and cleavage fragments have been   19   doubt and that that would not and that that would be the same after your   12   A. Yes.   2   A. Yes.   2   A. I do.   Q. Okay. And I would like to go to Page 15.   MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.   BY MR. SMITH:   19   Q. It says — it should be referred. It says refereed. Is that — should it be referred manuscripts?   A. No.   You — in your report you mentioned that your research anymore on tale to do do in your do your action.   10   A. Okay.   10   A. Okay.   11   A. Okay.   12   Q. That was confusing.   12   Q. It says — it should be referred. It says refereed. Is that — should it be referred manuscripts?   A. No.   15   A. Yes.   16   A. No.   17   A. Okay.   17   A. Okay.   18   A. Okay.   19   A. No.   18   A. Okay.   19   A. No.   19				
of lung disease or lung cancers.  Q. Well, you – you haven't published any articles on secondhand smoke, have you?  MR. FROST: Objection, form.  MR. FROST: Objection, form.  MR. FROST: Objection, form.  MR. FROST: Objection, form.  A. Secondhand smoke, no. Q. Okay. You mentioned all of your research a sbest – you mentioned all of your research on abetsots, talc and cleavage fragments have been published and peer-reviewed, high-impact secintific journals prior to the event – advent of your participation in talc litigation in 2014. And that's listed in your report.  Page 87  Do you recall saying that? A. Yes. Q. Let me rephrase. Let me rephrase it. A. Okay. Q. And I've got an extra copy for you. Several actually. MR. FROST: Is this the CV that was attached to the report? MR. SMITH: It is (Document marked for identification as Exhibit Mossman-9.)  BY MR. SMITH: Q. All right. Now, you've got –- do you have your CV in front of got voyu. Doctor? A. I'd. Q. Okay. And I would like to got to Page 15. MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm goin	6	me to be a member, as all my publications	6	
9 Q. Well, you - you haven't 10 published any articles on secondhand 11 smoke, have you? 12 MR. FROST: Objection, form. 13 BY MR. SMITH: 14 Q. Have you? 15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of 17 your research as best - you mentioned 18 all of your research on asbestos, talc 19 published and peer-reviewed, high-impact 20 published and peer-reviewed, high-impact 21 scientific journals prior to the event 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.  Page 87  Do you recall saying that? 2 A. Yes. 3 Q. I'll assume that would mean 4 that that would be the same after your 5 involvement in talc litigation. Would 6 that be correct? 7 A. I'm not sure what you're 8 asking. 9 Q. Let me rephrase. Let me 10 rephrase it. 11 A. Okay. 12 Q. That was confusing. 13 You - in your report you 14 mentioned that you'r research on asbestos 15 fibers, talc, and cleavage fragments have 16 been published and peer-reviewed, high-impact 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 litigation in 2014? 20 A. Yes. 21 Q. You agreed with that. 22 And I would assume that 23 Would be the same after your involvement 24 MR. SMITH: 25 A. I do. 26 Q. Okay. And I would like to 27 A. I do. 28 Q. Okay. And I would like to 29 to Page 15.  MR. SMITH: I'm going to 29 tatact rate was attached to the report? 29 A. You. 20 It says - it should be 21 referred. It says refereed. Is that - 22 should it be referred manuscripts? 28 A. No. 29 Q. Is that - am I missing 29 something new everyday. 20 Manuscripts, book chapters, 21 Manuscripts, book chapters, 22 Manuscripts, book chapters, 23 monographs and editorials, in parentheses 24 Provided that devent of your involvement 25 Manuscripts, book chapters, 26 Manuscripts, book chapters, 27 Manuscripts, book chapters, 28 Manuscripts, book chapters, 29 Manuscripts, book chapters, 29 Manuscripts, book chapters, 20 Manuscripts, book chapters, 21 Manuscripts, book chapters, 22 Manuscripts, book chapter	7	list tobacco smoke as the Number 1 cause	7	
published any articles on secondhand smoke, have you?  MR. FROST: Objection, form.  MR. FROST: Objection, form.  MR. FROST: Objection, form.  A. Secondhand smoke, no.  Q. Okay. You mentioned all of your research as best you mentioned all of all of your research as best you mentioned all of your research as best you mentioned all of all of your research as best you mentioned all of your research on asbestos, talc all of your research on asbestos, talc published and peer-reviewed, high-impact scientific journals prior to the event asking.  Page 87  Do you recall saying that?  A. Yes.  Q. I'll assume that would mean that that would be the same after your involvement in tale litigation. Would that be correct?  A. I'm of sure what you're asking.  Q. Let me rephrase. Let me rephrase. Let me rephrase it.  A. Okay.  Tair enough. I want to look at your CV for a second.  A. Okay.  Q. And I've got an extra copy for you. Several actually.  MR. FROST: Is this the CV that was attached to the report?  MR. SMITH: It is.  Q. All right. Now, you've got do you have your CV in front of got o Page 15.  Page 89	8	of lung disease or lung cancers.	8	not doing original research anymore on
smoke, have you?  MR. FROST: Objection, form. BY MR. SMITH:  Q. Have you?  A. Secondhand smoke, no. Q. Okay. You mentioned all of your research as best – you mentioned all of your research on asbestos, talc and cleavage fragments have been published and peer-reviewed, high-impact scientific journals prior to the event – advent of your participation in talc litigation in 2014. And that's listed in your report.  Page 87  Do you recall saying that? A. Yes. Q. I'll assume that would mean that that would be the same after your involvement in talc litigation. Would that be correct? A. I'm not sure what you're asking. Q. Let me rephrase. Let me rephrase it. A. Okay. Q. That was confusing. You – in your report you mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed, high-impact scientific journals prior to the advent of your participation in talc litigation in 2014?  A. Yes. Q. I'll assume that would mean that would be the same after your saking. Q. Let me rephrase. Let me rephrase it. A. Okay. Q. That was confusing. You – in your report you mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed, litigation in 2014?  A. Yes. Q. I'll assume that Would it be referred manuscripts? A. No. Q. Is that – am I missing something new everyday. Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed. A. Correct. Q. Hold on. I'm getting ahead of myself.	9	Q. Well, you you haven't	9	talc or asbestos fibers. So that
12 MR. FROST: Objection, form. 13 BY MR. SMITH: 14 Q. Have you? 15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of 17 your research as best you mentioned 18 all of your research as best you mentioned 18 all of your research as best you mentioned 19 and cleavage fragments have been 20 published and peer-reviewed, high-impact 21 scientific journals prior to the advent of your participation in talc 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.  Page 87  Page 87  Page 89  Page 8	10	published any articles on secondhand	10	statement would not be relevant.
13 BY MR. SMITH: 14 Q. Have you? 15 A. Secondhand smoke, no. Q. Okay. You mentioned all of 16 Q. Okay. You mentioned all of 17 your research as best you mentioned 18 all of your research on asbestos, tale 19 and cleavage fragments have been 19 published and peer-reviewed, high-impact 20 published and peer-reviewed, high-impact 21 scientific journals prior to the event 22 advent of your participation in tale 23 litigation in 2014. And that's listed in 24 your report.  Page 87  1 Do you recall saying that? 2 A. Yes. 3 Q. I'll assume that would mean 4 that that would be the same after your 5 involvement in tale litigation. Would 6 that be correct? 7 A. I'm not sure what you're 8 asking. 9 Q. Let me rephrase. Let me 10 rephrase it. 11 A. Okay. 12 Q. That was confusing. 13 You in your report you 14 mentioned that your research on asbestos 15 fibers, talc, and cleavage fragments have been published and peer-reviewed 16 been published and peer-reviewed 17 high-impact scientific journals prior to the advent of your participation in tale 18 d. Okay. 20 A. Yes. 21 Q. You agreed with that. 22 And I would assume that 22 Would be the same after your involvement 23 Would be the same after your 24 MR. SMITH: It is. 25 (Document marked for 26 identification as Exhibit 27 MR. SMITH: 28 War. SMITH: 29 Q. All right. Now, you've 29 A. I do. 20 Q. Okay. And I would like to 21 go to Page 15.  MR. SMITH: 22 A. I do. 23 Q. Okay. And I would like to 24 got Page 15.  MR. SMITH: 25 A. I do. 26 Q. Okay. And I would like to 27 attach this as the next numbered 28 exhibit. It's Number 9.  BY MR. SMITH: 29 Q. It says it should be 29 referred. It says refereed. Is that 20 should it be referred manuscripts?  A. No. 20 Is that am I missing 21 A. No. 21 Q. Well, then I I'm learning 22 something new everyday. 23 Manuscripts, book chapters, 24 monorgraphs and editorials, in parenthese 25 peer reviewed. 26 A. Correct. 27 Q. Hold on. I'm getting ahead 28 of myself.	11	smoke, have you?	11	Q. Okay. Fair enough. I want
13 BY MR. SMITH: 14 Q. Have you? 15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of 17 your research on asbestos, talc 18 all of your research on asbestos, talc 19 and cleavage fragments have been 19 published and peer-reviewed, high-impact 21 scientific journals prior to the event 22 advent of your participation in talc 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.  Page 87  Page 87  Page 89	12	MR. FROST: Objection, form.	12	
15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of 17 your research as best you mentioned 18 all of your research on asbestos, talc 19 and cleavage fragments have been 20 published and peer-reviewed, high-impact 21 scientific journals prior to the event 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.  Page 87  Page 87  Page 89  P	13		13	
15 A. Secondhand smoke, no. 16 Q. Okay. You mentioned all of 17 your research as best you mentioned 18 all of your research on asbestos, talc 19 and cleavage fragments have been 20 published and peer-reviewed, high-impact 21 scientific journals prior to the event 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.  Page 87  Page 87  Page 89  P	14	Q. Have you?	14	Q. And I've got an extra copy
16 Q. Okay. You mentioned all of 17 your research as best you mentioned 18 all of your research an asbestos, talc 19 and cleavage fragments have been 19 published and peer-reviewed, high-impact 20 published and peer-reviewed, high-impact 21 scientific journals prior to the event 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.  Page 87  Page 87  Page 89  Page 89  Page 89  1 Do you recall saying that? 2 A. Yes. 3 Q. I'll assume that would mean 4 that that would be the same after your 5 involvement in talc litigation. Would 6 that be correct? 7 A. I'm not sure what you're 8 asking. 9 Q. Let me rephrase. Let me 10 rephrase it. 11 A. Okay. 12 Q. That was confusing. 13 You in your report you 14 mentioned that your research on asbestos 15 fibers, talc, and cleavage fragments have been published and peer-reviewed 16 been published and peer-reviewed 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 20 litigation in 2014? 21 A. Yes. 22 A. Yes. 23 Page 87  Page 89  Page 8	15		15	
17    your research as best you mentioned all of your research on asbestos, talc and cleavage fragments have been published and peer-reviewed, high-impact scientific journals prior to the event 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.	16		16	
all of your research on asbestos, tale and cleavage fragments have been published and peer-reviewed, high-impact scientific journals prior to the event advent of your participation in tale litigation in 2014. And that's listed in your report.  Page 87  Page 87  Page 89		· · · · · · · · · · · · · · · · · · ·	17	
19 and cleavage fragments have been 20 published and peer-reviewed, high-impact 21 scientific journals prior to the event- 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.  25 Page 87  Page 87  Page 87  Page 89  1 Do you recall saying that? 2 A. Yes. 3 Q. I'll assume that would mean 4 that that would be the same after your 5 involvement in talc litigation. Would 6 that be correct? 7 A. I'm not sure what you're 8 asking. 9 Q. Let me rephrase. Let me 10 rephrase it. 11 A. Okay. 12 Q. That was confusing. 13 You - in your report you 14 mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed 17 high-impact scientific journals prior to litigation. Would assume that 20 A. Yes. 21 Q. You agreed with that. 22 A. I do. 3 Q. Okay. And I would like to 4 go to Page 15.  MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: 9 Q. It says it should be referred. It says refereed. Is that should it be referred manuscripts?  A. No. 12 A. No. 13 You in your report you 14 mentioned that your research on asbestos fibers, talc, and cleavage fragments have 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 litigation in 2014? 20 A. Yes. 21 Q. You agreed with that. 22 A. I do. 3 Q. Okay. And I would like to 4 go to Page 15.  MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  A. No.  G. Is that am I missing 14 something?  A. No.  Well, then I I'm learning 15 something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Correct.  Q. Hold on. I'm getting ahead of myself.		•		•
published and peer-reviewed, high-impact scientific journals prior to the event				
21 scientific journals prior to the event 22 advent of your participation in talc 23 litigation in 2014. And that's listed in 24 your report.  25 Page 87  26 Page 87  27 Page 89  28 Py MR. SMITH: 29 Q. All right. Now, you've 29 got do you have your CV in front of  29 Page 89  20 Page 89  21 Do you recall saying that? 22 A. Yes. 23 Q. I'll assume that would mean 24 that that would be the same after your 25 involvement in talc litigation. Would 26 that be correct? 27 A. I'm not sure what you're 28 asking. 29 Q. Let me rephrase. Let me 20 rephrase it. 21 A. Okay. 21 Q. That was confusing. 22 A. No. 23 Q. Is that am I missing 24 would be the same after your 25 page 15. 26 mR. SMITH: I'm going to 26 attach this as the next numbered exhibit. It's Number 9. 28 BY MR. SMITH: 29 Q. It says it should be referred. It says refereed. It shat should it be referred manuscripts? 29 A. No. 20 Q. Well, then I I'm learning something new everyday. 20 Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed. 21 Q. You agreed with that. 22 And I would assume that would be the same after your involvement 23 of myself.			1	•
advent of your participation in tale litigation in 2014. And that's listed in your report.  Page 87  Page 87  Page 89  Do you recall saying that?  A. Yes.  Q. All right. Now, you've got do you have your CV in front of  Page 89  Do you recall saying that?  A. Yes.  Q. Okay. And I would like to go to Page 15.  MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  Q. Okay. And I would like to go to Page 15.  MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  I'm going to Attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  I'm going to Attach this as the next numbered exhibit. It's Number 9.  A. No, It's refereed. Is that should it be referred manuscripts?  A. No, It's refereed.  Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Yes.  Q. You agreed with that. A. Correct. And I would assume that  A. Correct. Q. Hold on. I'm getting ahead of myself.				
Dage 87  Page 87  Page 87  Page 89  Do you recall saying that?  A. Yes.  O I'll assume that would mean that that would be the same after your saking.  A. I'm not sure what you're asking.  Q. Let me rephrase. Let me rephrase it.  A. Okay.  D. That was confusing.  Q. That was confusing.  You in your report you mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed high-impact scientific journals prior to the advent of your participation in 2014?  A. Yes.  Q. All right. Now, you've got do you have your CV in front of  Page 89  Q. All right. Now, you've got do you have your CV in front of  Page 89  Q. All right. Now, you've got do you have your CV in front of  Page 89  Q. All right. Now, you've got do you have your CV in front of  Page 89  Q. All right. Now, you've got do you have your CV in front of  Page 89  Q. All right. Now, you've got do you have your CV in front of  A. I do.  Q. Okay. And I would like to go to Page 15.  MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  Q. It says it should be referred. Is tays refereed. Is that should it be referred manuscripts?  A. No.  Q. Is that am I missing something?  A. No, it's refereed.  Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Yes. Q. You agreed with that.  A. Correct. Q. Hold on. I'm getting ahead of myself.		• •		,
Page 87  Do you recall saying that?  A. Yes.  Q. I'll assume that would mean that that would be the same after your involvement in talc litigation. Would that be correct?  A. I'm not sure what you're asking.  Q. Let me rephrase. Let me phrase it.  A. Okay.  Q. That was confusing.  You in your report you mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed plitigation in 2014?  A. Yes.  Q. Yokay. And I would like to go to Page 15.  MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  Q. It says it should be referred. It says refereed. Is that should it be referred manuscripts?  A. No.  Q. Is that am I missing something?  A. No, it's refereed.  Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Yes.  Q. You agreed with that.  A. Orrect.  Q. Hold on. I'm getting ahead of myself.		• • •		
Page 87  Do you recall saying that?  A. Yes.  Q. I'll assume that would mean that that would be the same after your involvement in talc litigation. Would that be correct?  A. I'm not sure what you're asking. Q. Let me rephrase. Let me Crephrase it. A. Okay.  A. No.  Would it be referred. It says refereed. Is thatshould it be referred manuscripts?  A. No.  Wou in your report you  Mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed high-impact scientific journals prior to the advent of your participation in talc litigation in 2014?  A. Yes.  Q. You agreed with that.  A. Orrect.  Q. Hold on. I'm getting ahead of myself.		=		
1 Do you recall saying that? 2 A. Yes. 3 Q. I'll assume that would mean 4 that that would be the same after your 5 involvement in talc litigation. Would 6 that be correct? 7 A. I'm not sure what you're 8 asking. 9 Q. Let me rephrase. Let me 10 rephrase it. 11 A. Okay. 12 Q. That was confusing. 13 You in your report you 14 mentioned that your research on asbestos 15 fibers, talc, and cleavage fragments have 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 Q. You agreed with that. 20 And I would assume that 21 And I would assume that 22 And I would be the same after your involvement 2 A. You I'm getting ahead 2 Of myself.	44	your report.		got do you have your C v in hom of
A. Yes.  Q. I'll assume that would mean that that would be the same after your involvement in tale litigation. Would that be correct?  A. I'm not sure what you're asking. Q. Let me rephrase. Let me rephrase it. A. Okay.  Q. That was confusing. A. No. You in your report you fibers, talc, and cleavage fragments have been published and peer-reviewed fibers, talc, and cleavage fragments have let advent of your participation in talc litigation in 2014? A. Yes.  A. I do. Q. Okay. And I would like to go to Page 15. MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9. BY MR. SMITH: Q. It says it should be referred. It says refereed. Is that should it be referred manuscripts? A. No. Q. Is that am I missing something? A. No, it's refereed. Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, peer reviewed. A. Yes. Q. You agreed with that. A. Correct. And I would assume that would be the same after your involvement  A. Ido. Q. Okay. And I would like to go to Page 15. MR. SMITH: Q. It says it should be referred. It says refereed. Is that should it be referred manuscripts? A. No. Q. Is that am I missing something? A. No, it's refereed. Q. Well, then I I'm learning something new everyday.  A. Yes. Q. You agreed with that. A. Correct. Q. Hold on. I'm getting ahead of myself.		Page 87		Page 89
Q. I'll assume that would mean that that would be the same after your involvement in talc litigation. Would that be correct? A. I'm not sure what you're asking. Q. It says it should be rephrase it. A. Okay. A. Okay.  That was confusing. Q. That was confusing. You in your report you fibers, talc, and cleavage fragments have been published and peer-reviewed fibers, talc, and cleavage fragments have fibers, talc, and cleavage fragments prior to fibers, talc, and cleavage fragments prior to fibers, talc, and cleavage fragments have fibers that of your participation in talc filtigation in 2014?  Q. You agreed with that. Q. Hold on. I'm getting ahead of myself.	1	Do you recall saying that?	1	you, Doctor?
that that would be the same after your involvement in talc litigation. Would that be correct?  A. I'm not sure what you're asking.  Q. Let me rephrase. Let me prephrase it.  A. Okay.  C. That was confusing.  You in your report you mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed the advent of your participation in talc litigation. Would be the same after your involvement asking.  4 go to Page 15.  MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  Q. It says it should be referred. It says refereed. Is that should it be referred manuscripts?  A. No.  Q. Is that am I missing something?  A. No, it's refereed.  Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Yes.  Q. You agreed with that.  A. Correct.  Q. Hold on. I'm getting ahead of myself.	2		2	
that that would be the same after your involvement in talc litigation. Would that be correct?  A. I'm not sure what you're asking.  Q. Let me rephrase. Let me rephrase it.  A. Okay.  That was confusing.  You in your report you mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed the advent of your participation in talc litigation in 2014?  A. Yes.  That that would be the same after your involvement to that that would in the reference in the advent of your participation in talc and I would assume that would be the same after your involvement to that that that that that that that	3	Q. I'll assume that would mean	3	Q. Okay. And I would like to
involvement in talc litigation. Would that be correct?  A. I'm not sure what you're asking.  Q. Let me rephrase. Let me rephrase it.  A. Okay.  Q. That was confusing.  You in your report you fibers, talc, and cleavage fragments have been published and peer-reviewed high-impact scientific journals prior to litigation in 2014?  A. Yes.  Q. You agreed with that.  Q. You agreed with that.  A. Okay.  Image: MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: Q. Attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: Q. Attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH: I'm going to attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this attach this as the next numbered exhibit. It's Number 9.  BY MR. SMITH:  A this attach this as the next number of exhibit. It's Number 9.  BY MR. SMITH:  A this attach this as the next number of exhibit. It's Number 9.  BY MR. SMITH:  A this attach the exhibit. It's number of exhibit. It's	4		4	
that be correct?  A. I'm not sure what you're asking.  Q. Let me rephrase. Let me rephrase it.  A. Okay.  Q. That was confusing.  You in your report you mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed high-impact scientific journals prior to litigation in 2014?  A. Yes.  Q. You agreed with that.  Q. You agreed with that.  A. I'm not sure what you're exhibit. It's Number 9. BY MR. SMITH:  Q. It says it should be referred. It says refereed. Is that should it be referred manuscripts?  A. No. Q. Is that am I missing something?  A. No, it's refereed. Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Correct. Q. Hold on. I'm getting ahead of myself.	5	•	5	
8 asking. 9 Q. Let me rephrase. Let me 10 rephrase it. 11 A. Okay. 12 Q. That was confusing. 13 You in your report you 14 mentioned that your research on asbestos 15 fibers, talc, and cleavage fragments have 16 been published and peer-reviewed 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 litigation in 2014? 20 A. Yes. 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 20 mentioned that your research on asbestos 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 20 mentioned that your research on asbestos 21 Q. You agreed with that. 22 Q. Hold on. I'm getting ahead 23 of myself.	6		6	
8 asking. 9 Q. Let me rephrase. Let me 10 rephrase it. 11 A. Okay. 12 Q. That was confusing. 13 You in your report you 14 mentioned that your research on asbestos 15 fibers, talc, and cleavage fragments have 16 been published and peer-reviewed 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 litigation in 2014? 20 A. Yes. 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 20 mentioned that your research on asbestos 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 20 mentioned that your research on asbestos 21 Q. You agreed with that. 22 Q. Hold on. I'm getting ahead 23 of myself.	7	A. I'm not sure what you're	7	
9 Q. Let me rephrase. Let me 10 rephrase it. 11 A. Okay. 11 should it be referred. It says refereed. Is that 11 A. No. 12 Q. That was confusing. 13 You in your report you 14 mentioned that your research on asbestos 15 fibers, talc, and cleavage fragments have 16 been published and peer-reviewed 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 litigation in 2014? 20 A. Yes. 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 20 of myself.	8		8	
rephrase it.  10 referred. It says refereed. Is that 11 A. Okay.  11 should it be referred manuscripts?  A. No. 13 You in your report you 14 mentioned that your research on asbestos 15 fibers, talc, and cleavage fragments have 16 been published and peer-reviewed 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 litigation in 2014? 19 Manuscripts, book chapters, 19 litigation in 2014? 20 A. Yes. 20 peer reviewed. 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 20 five referred. It says refereed. Is that 24 should it be referred. It says refereed. Is that 25 should it be referred. It says refereed. Is that 26 it says refereed. Is that 27 an I missing 28 something?  A. No, it's refereed.  Q. Well, then I I'm learning 29 something new everyday.  Manuscripts, book chapters, 20 monographs and editorials, in parentheses 21 A. Correct. 22 And I would assume that 23 O. Hold on. I'm getting ahead 24 of myself.				
A. Okay.  Q. That was confusing.  You in your report you  mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed high-impact scientific journals prior to the advent of your participation in talc litigation in 2014?  A. No.  Q. Is that am I missing something?  A. No, it's refereed. Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Yes. Q. You agreed with that.  Q. You agreed with that.  A. Correct. Q. Hold on. I'm getting ahead of myself.	10		1	
Q. That was confusing.  You in your report you  mentioned that your research on asbestos fibers, talc, and cleavage fragments have fibers published and peer-reviewed high-impact scientific journals prior to fibers the advent of your participation in talc fibers the advent of your participation in talc fibers talc, and cleavage fragments have fibers talc, and I would assume that fibers talc, and I was		-		•
You in your report you 13 Q. Is that am I missing 14 mentioned that your research on asbestos 15 fibers, talc, and cleavage fragments have 16 been published and peer-reviewed 16 been published and peer-reviewed 17 high-impact scientific journals prior to 18 the advent of your participation in talc 19 litigation in 2014? 19 Manuscripts, book chapters, 19 monographs and editorials, in parentheses 20 A. Yes. 20 peer reviewed. 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 24 O. Is that am I missing 26 Something? 27 A. No, it's refereed. 28 Manuscripts, book chapters, 29 monographs and editorials, in parentheses 20 peer reviewed. 21 A. Correct. 22 Q. Hold on. I'm getting ahead 23 of myself.		· ·		<del>_</del>
mentioned that your research on asbestos fibers, talc, and cleavage fragments have been published and peer-reviewed high-impact scientific journals prior to the advent of your participation in talc litigation in 2014?  A. No, it's refereed.  Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Yes.  Q. You agreed with that.  A. Correct.  And I would assume that would be the same after your involvement  assume that your participation abbestos A. No, it's refereed. A. No, it's refered. A. No, it's refered				
fibers, talc, and cleavage fragments have been published and peer-reviewed high-impact scientific journals prior to the advent of your participation in talc litigation in 2014?  A. No, it's refereed. Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Yes.  Q. You agreed with that.  A. Correct.  And I would assume that would be the same after your involvement  A. No, it's refereed.  A. No, it's refered.  A. No, it's refereed.  A. No, it's refered.  A. No, it				
been published and peer-reviewed high-impact scientific journals prior to the advent of your participation in talc litigation in 2014?  A. Yes.  Q. Well, then I I'm learning something new everyday.  Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Yes.  Q. You agreed with that.  And I would assume that would be the same after your involvement  Description:  And I would assume that  Description:  Descr				
high-impact scientific journals prior to the advent of your participation in talc litigation in 2014?  A. Yes.  Q. You agreed with that.  And I would assume that would be the same after your involvement  17 something new everyday.  18 Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  20 peer reviewed.  A. Correct. Q. Hold on. I'm getting ahead of myself.				· · · · · · · · · · · · · · · · · · ·
the advent of your participation in talc  litigation in 2014?  A. Yes.  Q. You agreed with that.  And I would assume that  would be the same after your involvement  18 Manuscripts, book chapters, monographs and editorials, in parentheses peer reviewed.  A. Correct.  Q. Hold on. I'm getting ahead of myself.		•	1	· · · · · · · · · · · · · · · · · · ·
19 litigation in 2014? 20 A. Yes. 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 29 monographs and editorials, in parentheses peer reviewed. 21 A. Correct. 22 Q. Hold on. I'm getting ahead of myself.				
20 A. Yes. 21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 20 peer reviewed. 21 A. Correct. 22 Q. Hold on. I'm getting ahead 23 of myself.				
21 Q. You agreed with that. 22 And I would assume that 23 would be the same after your involvement 21 A. Correct. 22 Q. Hold on. I'm getting ahead 23 of myself.		_		
And I would assume that 22 Q. Hold on. I'm getting ahead would be the same after your involvement 23 of myself.				•
would be the same after your involvement 23 of myself.				
24 post 2014; is that correct? 24 Let's go back to Page 2.		•		•
	∠4	post 2014, is that correct?	24	Let's go back to rage 2.

	Page 90		Page 92
1		1	
2		2	(Document marked for identification as Exhibit
	Q. And you have reviewer and in		
3	parentheses journals. And this is all of	3	Mossman-10.)
4	the journals that you have served as a	4	BY MR. SMITH:
5	reviewer of?	5	Q. Okay. And you see it's
6	A. Yes.	6	written by David Michaels. And if you go
7	Q. And then if we go to Page 3,	7	to the very last page. It says, "David
8	and you look at that section, it's the	8	Michaels is an epidemiologist and the
9	fourth from the bottom, Regulatory	9	director of the project on scientific
10	Pharmacology and Toxicology. You served	10	knowledge and public policy at the George
11	as a reviewer for that publication; is	11	Washington University School of Public
12	that correct, according to your CV?	12	Health and Health Services.
13	A. Let's see. Could you go to	13	"During the Clinton
14	the page again?	14	administration he served as assistant
15	Q. Sure. It's Page 3. And if	15	secretary of energy for environment,
16	you go up, it's under like at the top,	16	safety and health responsible for
17	it's got the list of journals, and if you	17	protecting the health and safety of
18	see science at the bottom, then you see	18	workers, neighboring communities, and the
19	scanning electron microscopy, and then	19	environment surrounding the nation's
20	A. Yes.	20	nuclear weapons facilities. He was the
21	Q you see risk analysis,	21	architect of the historic initiative that
22	then you see Regulatory Pharmacology and	22	'made peace with the past,' compensating
23	Toxicology.	23	U.S. nuclear weapons workers for
24	Do you see that?	24	illnesses developed while making or
	Do you see that.		minesses developed winte making of
	Page 91		Page 93
			3
1	A. Yes, I reviewed for them.	1	testing atomic weapons.
1 2	<ul><li>A. Yes, I reviewed for them.</li><li>Q. Okay. And I want to talk</li></ul>	1 2	
			testing atomic weapons.
2	Q. Okay. And I want to talk	2	testing atomic weapons. "In 2006 Michaels received
2	Q. Okay. And I want to talk about the Journal of Regulatory	2 3	testing atomic weapons. "In 2006 Michaels received an American Association" "received the
2 3 4	<ul> <li>Q. Okay. And I want to talk</li> <li>about the Journal of Regulatory</li> <li>Toxicology and Pharmacology for a second.</li> <li>Do you believe this is a</li> </ul>	2 3 4	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement
2 3 4 5	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second.	2 3 4 5	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He
2 3 4 5 6 7	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is.	2 3 4 5 6	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."
2 3 4 5 6	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it.	2 3 4 5 6 7	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He
2 3 4 5 6 7 8	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is.	2 3 4 5 6 7 8	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?
2 3 4 5 6 7 8 9	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David	2 3 4 5 6 7 8	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him
2 3 4 5 6 7 8 9 10 11	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No.	2 3 4 5 6 7 8 9 10	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.
2 3 4 5 6 7 8 9 10 11	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer	2 3 4 5 6 7 8 9 10 11 12	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name. Q. If you'll go to it's on
2 3 4 5 6 7 8 9 10 11 12 13	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin.	2 3 4 5 6 7 8 9 10 11 12 13	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in.
2 3 4 5 6 7 8 9 10 11 12 13	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in	2 3 4 5 6 7 8 9 10 11 12 13	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.
2 3 4 5 6 7 8 9 10 11 12 13 14	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this
2 3 4 5 6 7 8 9 10 11 12 13 14 15	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government? A. I no, the name doesn't	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government? A. I no, the name doesn't ring a bell.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a reviewer on.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government? A. I no, the name doesn't ring a bell. Q. Well, he wrote a book called	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name. Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a reviewer on.  MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government? A. I no, the name doesn't ring a bell. Q. Well, he wrote a book called "Doubt is Their Product: How Industry's	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a reviewer on.  MR. FROST: Objection. BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government? A. I no, the name doesn't ring a bell. Q. Well, he wrote a book called "Doubt is Their Product: How Industry's Assault on Science Threatens Your	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a reviewer on.  MR. FROST: Objection. BY MR. SMITH: Q. Quote down at the bottom,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second.  Do you believe this is a reputable independent journal?  A. Yes, I believe it is. Historically I've heard a lot about it.  Q. Do you know who David Michaels is?  A. No.  Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government?  A. I no, the name doesn't ring a bell.  Q. Well, he wrote a book called "Doubt is Their Product: How Industry's Assault on Science Threatens Your Health."	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a reviewer on.  MR. FROST: Objection. BY MR. SMITH:  Q. Quote down at the bottom, "There is now a slew of these captured
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government? A. I no, the name doesn't ring a bell. Q. Well, he wrote a book called "Doubt is Their Product: How Industry's Assault on Science Threatens Your Health." And I'd like do you have	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a reviewer on.  MR. FROST: Objection. BY MR. SMITH:  Q. Quote down at the bottom, "There is now a slew of these captured journals. The tobacco industry, for
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second.  Do you believe this is a reputable independent journal?  A. Yes, I believe it is. Historically I've heard a lot about it.  Q. Do you know who David Michaels is?  A. No.  Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government?  A. I no, the name doesn't ring a bell.  Q. Well, he wrote a book called "Doubt is Their Product: How Industry's Assault on Science Threatens Your Health."  And I'd like do you have a copy in front of you, Doctor?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a reviewer on.  MR. FROST: Objection. BY MR. SMITH:  Q. Quote down at the bottom, "There is now a slew of these captured journals. The tobacco industry, for example, secretly financed the journal
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. Okay. And I want to talk about the Journal of Regulatory Toxicology and Pharmacology for a second. Do you believe this is a reputable independent journal? A. Yes, I believe it is. Historically I've heard a lot about it. Q. Do you know who David Michaels is? A. No. Q. You served as a peer reviewer of him on the NIOSH 62 bulletin. You don't know him, that used to work in the federal government? A. I no, the name doesn't ring a bell. Q. Well, he wrote a book called "Doubt is Their Product: How Industry's Assault on Science Threatens Your Health." And I'd like do you have	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	testing atomic weapons.  "In 2006 Michaels received an American Association" "received the American Association For the Advancement of Science" "Sciences, Scientific Freedom and Responsibility Award. He lives in Bethesda, Maryland."  And that doesn't ring any bells?  A. No, I don't recognize him and I don't recognize the name.  Q. If you'll go to it's on Page it's the fourth or fifth page in. If you look at the top, it's Page 53.  And he discusses this publication for which he served as a reviewer on.  MR. FROST: Objection. BY MR. SMITH:  Q. Quote down at the bottom, "There is now a slew of these captured journals. The tobacco industry, for

	Page 94		Page 96
1	and position for legal purposes the idea	1	academic scientists and I'm not
2	that indoor air pollution was a problem	2	sure of the context of this or the
3	caused not by secondhand smoke but by	3	years that this covers.
4	inadequate ventilation. The best known	4	Again, I've reviewed for
5	of these publications is Regulatory	5	them in the past. I have not been
6	Toxicology and Pharmacology, the official	6	on their editorial board, so I
7	mouthpiece of the International Society	7	really can't comment on this.
8	of Regulatory Toxicology and Pharmacology	8	BY MR. SMITH:
9	or ISRTP, an impressive name, but really	9	Q. Do you know what the
10	just an association dominated by	10	Weinberg Group's involvement has been in
11	scientists who work for industry trade	11	talc litigation or defense of talc?
12	groups and consulting firms.	12	MR. FROST: Objection to
13	"The sponsor of the ISRTP	13	form.
14	include many of the major tobacco,	14	THE WITNESS: No.
15	chemical, and drug manufacturing	15	BY MR. SMITH:
16	companies. Its leadership consists of	16	Q. I'd like to show you another
17	corporate and product defense scientists	17	article.
18	and attorneys along with a small number	18	(Document marked for
19	of government scientists who have	19	identification as Exhibit
20	apparently bought in or who do not know	20	Mossman-11.)
21	better.	21	BY MR. SMITH:
22	"The immediate past	22	Q. Attached as the next
23	president was Terry Quill, an attorney	23	numbered exhibit. Attached Doubt is
24	who became a senior vice president for	24	Their Product was Exhibit 10. This is
	Page 95		Page 97
1	the product defense of" excuse me	1	going to be Exhibit 11.
2	"product defense of the Weinberg Group.	2	This is an article entitled
3	Quill also has roots in the tobacco wars,	3	"Special Contributions: Correspondence
4	but is not a scientific expert. Rather	4	About Public Ethics and Regulatory
5	he served as outside counsel to Philip	5	Toxicology and Pharmacology."
6	Morris in the secondhand smoke	6	This is this is published
7	litigation."	7	in a peer-reviewed journal called the
8	Have you ever seen that	8	International Journal of Occupational and
9	written about Regulatory Toxicology and	9	Environmental Health. And it was in
10	Pharmacology, the journal that you served	10	November 19, 2002. And I'm going to read
11	as a reviewer of?	11	from the from the top.
		1	
	MR. FROST: I'll sav	12	MR. FROST: Okay, Liust
12	MR. FROST: I'll say first, I'll just object to using	12 13	MR. FROST: Okay. I just want to object to any connotation
12 13	first, I'll just object to using	13	want to object to any connotation
12 13 14	first, I'll just object to using what is basically an opinion piece	1	want to object to any connotation that this letter is peer-reviewed.
12 13	first, I'll just object to using what is basically an opinion piece in this case.	13 14	want to object to any connotation that this letter is peer-reviewed. BY MR. SMITH:
12 13 14 15 16	first, I'll just object to using what is basically an opinion piece in this case.  But you can answer the	13 14 15	want to object to any connotation that this letter is peer-reviewed.  BY MR. SMITH:  Q. "In this issue, IJOEH is
12 13 14 15 16 17	first, I'll just object to using what is basically an opinion piece in this case.  But you can answer the question, Brooke.	13 14 15 16 17	want to object to any connotation that this letter is peer-reviewed.  BY MR. SMITH:  Q. "In this issue, IJOEH is publishing correspondence concerning
12 13 14 15 16 17	first, I'll just object to using what is basically an opinion piece in this case.  But you can answer the question, Brooke.  THE WITNESS: Yeah, I'm not	13 14 15 16 17 18	want to object to any connotation that this letter is peer-reviewed.  BY MR. SMITH:  Q. "In this issue, IJOEH is publishing correspondence concerning conflicts of interest, lack of
12 13 14 15 16 17 18	first, I'll just object to using what is basically an opinion piece in this case.  But you can answer the question, Brooke.  THE WITNESS: Yeah, I'm not familiar with what this source is.	13 14 15 16 17 18 19	want to object to any connotation that this letter is peer-reviewed.  BY MR. SMITH:  Q. "In this issue, IJOEH is publishing correspondence concerning conflicts of interest, lack of transparency and absence of editorial
12 13 14 15 16 17 18 19 20	first, I'll just object to using what is basically an opinion piece in this case.  But you can answer the question, Brooke.  THE WITNESS: Yeah, I'm not familiar with what this source is. It looks like a book chapter.	13 14 15 16 17 18 19 20	want to object to any connotation that this letter is peer-reviewed. BY MR. SMITH: Q. "In this issue, IJOEH is publishing correspondence concerning conflicts of interest, lack of transparency and absence of editorial independence of the journal Regulatory
12 13 14 15 16 17 18 19 20 21	first, I'll just object to using what is basically an opinion piece in this case.  But you can answer the question, Brooke.  THE WITNESS: Yeah, I'm not familiar with what this source is. It looks like a book chapter.  Again, Regulatory Toxicology and	13 14 15 16 17 18 19 20 21	want to object to any connotation that this letter is peer-reviewed.  BY MR. SMITH:  Q. "In this issue, IJOEH is publishing correspondence concerning conflicts of interest, lack of transparency and absence of editorial independence of the journal Regulatory Toxicology and Pharmacology, RTP."
12 13 14 15 16 17 18 19 20	first, I'll just object to using what is basically an opinion piece in this case.  But you can answer the question, Brooke.  THE WITNESS: Yeah, I'm not familiar with what this source is. It looks like a book chapter.	13 14 15 16 17 18 19 20	want to object to any connotation that this letter is peer-reviewed. BY MR. SMITH: Q. "In this issue, IJOEH is publishing correspondence concerning conflicts of interest, lack of transparency and absence of editorial independence of the journal Regulatory

25 (Pages 94 to 97)

1 review articles for them. I have no idea 2 when this was. And I have no idea who 3 forwarded me the papers for review. 4 Q. Ma'am, I'm just reading from 5 your CV, and you said that you were a 6 reviewer of Regulatory Toxicology and 7 Pharmacology, correct? 8 A. I have reviewed papers for 9 that journal. 10 Q. "Regulatory Toxicology and 11 Pharmacology is the official publication 12 of the industry-funded International 13 Society of Regulatory Toxicology and 14 Pharmacology or ISRTP." Then it goes 15 down into the second third paragraph. 16 "IJOEH has chosen to publish this 17 exchange in order to alert readers to the 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 21 to particular scientific points of view. 22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These  Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 form' is the appropriate 6 objection. 6 MR. FROST: I'll try to 7 remember that. 8 BY MR. SMITH: 9 Q. And then I want to go on further. It says, "November 19, 2002, 11 Ms. Kirsten Chrisman, managing edite 12 Journals Division, Academic Press. A Paul Weislogel, vice president, global 13 Society of Elsevier, Science, Inc. Are you familiar with that publication? 16 They publish a lot of 17 scientific literature. 18 A. Who is this now? 19 Q. I might be pronouncing the 19 name Elsevier Science, Inc.? 20 A. Yes. I'm looking at the 21 journal, though, sir. And this is a 22 letter, and it's signed by a number of 23 individuals, several whom I recognize  Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 MR. FROST: Well, I think 7 you did ask a question.		Dago 09		Page 100
when this was. And I have no idea who forwarded me the papers for review. Q. Ma'am, I'm just reading from your CV, and you said that you were a reviewer of Regulatory Toxicology and Pharmacology, correct?  A. I have reviewed papers for that journal. Q. "Regulatory Toxicology and Pharmacology is the official publication of the industry-funded International Society of Regulatory Toxicology and Pharmacology or ISRTP." Then it goes down into the second — third paragraph. Was and I have reviewed papers for that journal Weislogel, vice president, global Society, of Elsevier, Science, Inc. Are Was in which supposedly credible ways in which supposedly credible peer-reviewed journals may be co-opted by corporations seeking to give credibility to particular scientific points of view.  "RTP publishes a large corporations seeking to give credibility to particular scientific points of view.  "RTP publishes a large was industry-funded scientists. These  Page 99  studies later become part of industry's efforts to influence federal regulatory agencies or defend litigation claims concerning toxic exposure.  "Without safeguards to assure their independence of the editorial process, suspicion, some of it well deserved, is cast over studies and journals."  And that was written by the editorial-in-chief of this publication.  And that was written by the editorial-in-chief of this publication.  And that was written by the editorial-in-chief of this publication.  And that was written by the editorial-in-chief of this publication.  And that was written by the editorial-in-chief of this publication.  And that was written by the editorial-in-chief of this witness.  THE WITNESS: If I can - MS, O'DELL: "Object to the form" - THE WITNESS: If I can look		Page 98		Page 100
3   forwarded me the papers for review.   4   Q. Ma'am, I'm just reading from 5   5 your CV, and you said that you were a reviewer of Regulatory Toxicology and 6   7   Pharmacology, correct?   7   8   A. I have reviewed papers for that journal.   9   10   Q. "Regulatory Toxicology and 11   Pharmacology is the official publication 12   of the industry-funded International 13   Society of Regulatory Toxicology and 14   Pharmacology or ISRTP." Then it goes 15   down into the second third paragraph.   16   "IJOEH has chosen to publish this 17   exchange in order to alert readers to the 18   ways in which supposedly credible 19   peer-reviewed journals may be co-opted by 20   corporations seeking to give credibility 21   to particular scientific points of view. 22   "RTP publishes a large 23   number of studies conducted by industry-funded scientists. These   Page 99   Page 23   agencies or defend litigation claims 4   concerning toxic exposure.   Fage 99   Page 24   will be proposure of the 24   ditter independence of the 25   editor-in-chief of this publication.   12   Do you see that?   13   MR. FROST: Again, I object 14   to the use of what is clearly an opinion piece to try to establish 16   facts in this case and in 17   questioning this witness.   THE WITNESS: If I can 19   MS. O'DELL: "Object to the 60   form" 20   THE WITNESS: If I can look 21   Pharmacology or starter of the content of the popular or the popular or the popular or the publication of a society of which 12   Q. Ma'am, do we need to go back of the popular or the publication of a society of which 12   publication of a society of which 14   The WITNESS: If I can look 21   Q. Ma'am, do we need to go back of the popular or the publication of a society of which 15   and mot a member.   Page 10   Page 1				
4 Q. Ma'am, I'm just reading from 5 your CV, and you said that you were a 6 reviewer of Regulatory Toxicology and 7 Pharmacology, correct? 8 A. I have reviewed papers for 8 that journal. 10 Q. "Regulatory Toxicology and 11 Pharmacology is the official publication 12 of the industry-funded International 13 Society of Regulatory Toxicology and 14 Pharmacology or ISRTP." Then it goes 15 down into the second — third paragraph. 16 "IJOEH has chosen to publish this 17 exchange in order to alert readers to the 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 21 to particular scientific points of view. 22 "RTP publishes a large number of studies conducted by industry-funded scientists. These 24 industry-funded scientists. These 25 efforts to influence federal regulatory 26 assure their independence of the editor-in-chief of this publication. 27 Eagle Page 28 The Without safeguards to assure their independence of the editor-in-chief of this publication. 29 Do you see that? 20 And that was written by the editor-in-chief of this publication. 21 Do you see that? 22 MR. FROST: Again, I object to the to the use of what is clearly an opinion piece to try to establish facts in this case and in questioning this witness. 20 THE WITNESS: If I can			1	
5 your CV, and you said that you were a reviewer of Regulatory Toxicology and 7 Pharmacology, correct? 7 Pharmacology, correct? 8 A. I have reviewed papers for 8 that journal. 9 that journal. 9 Q. "Regulatory Toxicology and 10 Q. "Regulatory Toxicology and 11 Pharmacology is the official publication 12 of the industry-funded International 12 Journals Division, Academic Press. A Paul Weislogel, vice president, global Society, of Elsevier, Science, Inc. Are you familiar with that publication? 17 Elsevier Science, Inc. Are you familiar with that publication? 18 ways in which supposedly credibility 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 20 to particular scientific points of view. 21 They publishes a large 22 mumber of studies conducted by 24 industry-funded scientists. These 19 Studies later become part of industry's 22 efforts to influence federal regulatory 33 agencies or defend litigation claims 4 concerning toxic exposure. 19 And that was written by the 21 editor-in-chief of this publication. 20 you see that? 21 MR. FROST: Again, I object to the 4 to the use of what is clearly an opinion piece to try to establish 6 facts in this case and in questioning this witness. 17 Guestion in the section of a society of which 17 questioning this witness. 17 THE WITNESS: If I can MS. O'DELL: "Object to the 20 form" 20 THE WITNESS: If I can look 21 Ma'am, dow eneed to go bac	3		3	•
for reviewer of Regulatory Toxicology and Pharmacology, correct?  8 A. I have reviewed papers for that journal.  9 that journal.  10 Q. "Regulatory Toxicology and 10 firther. It says, "November 19, 2002, Ms. Kirsten Chrisman, managing edite Journals Division, Academic Press. A 13 Society of Regulatory Toxicology and 14 Pharmacology or ISRTP." Then it goes down into the second third paragraph.  16 "IJOEH has chosen to publish this 17 exchange in order to alert readers to the 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 20 corporations seeking to give credibility 20 industry-funded scientists. These  Page 99  1 studies later become part of industry's 24 industry-funded scientists. These  Page 99  1 studies later become part of industry's 24 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 19 well deserved, is cast over studies and 19 journals."  10 And that was written by the 21 editor-in-chief of this publication. 20 you see that? 21 MR. FROST: I'll try to remember that.  BY MR. SMITH: 20, And then I want to go on further. It says, "November 19, 2002, Ms. Kirsten Chrisman, managing edite Journals Division, Academic Press. A Paul Weislogel, vice president, global Society, of Elsevier, Science, Inc. Are you familiar with that publication? They publish a lot of scientific literature. A. Who is this now? Q. I might be pronouncing the name - Elsevier Science, Inc.?  A. Yes. I'm loking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize of the editor-in-chief of this publication. 15 manuer of the pound of			4	form" is the appropriate
7 Pharmacology, correct? 8 A. I have reviewed papers for 9 that journal. 10 Q. "Regulatory Toxicology and 11 Pharmacology is the official publication 12 of the industry-funded International 13 Society of Regulatory Toxicology and 14 Pharmacology or ISRTP." Then it goes 15 down into the second third paragraph. 16 "I/OEH has chosen to publish this 17 exchange in order to alert readers to the 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 21 to particular scientific points of view. 22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These  Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 10 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look 21 Regulatory Toxicology and 22 Interter, It says, "November 19, 2002, Ms. Kirsten Chrisman, managing editr. 24 Gociety, of Elsevier, Science, Inc. Are you familiar with that publication? 25 Cociety, of Elsevier, Science, Inc. Are you familiar with that publication? 26 A. Who is this publication? 27 A. Yes. I'm looking at the name Elsevier Science, Inc.? 28 A. Who is this publication? 29 Journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize 29 plaintiff experts. 20 Q. Ma'am, there's not a question on the table. I'm going to ask you a question though. Okay. 30 Are limited experts. 4 you add ask a question. 4 It would give this, based upon the			5	objection.
8 A. I have reviewed papers for 9 that journal. 9 (2) "Regulatory Toxicology and 10 (2) "Regulatory Toxicology and 11 Pharmacology is the official publication of the industry-funded International 12 Journals Division, Academic Press. A 13 Society of Regulatory Toxicology and 13 Society of Regulatory Toxicology and 14 Pharmacology or ISRTP." Then it goes 14 Society, of Elsevier, Science, Inc. Are 15 down into the second third paragraph. 15 down into the second third paragraph. 16 "IJOEH has chosen to publish this 16 reschange in order to alert readers to the 17 exchange in order to alert readers to the 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 20 to particular scientific points of view. 21 to particular scientific points of view. 22 mumber of studies conducted by 23 industry-funded scientists. These 24 industry-funded scientists. These 25 mumber of studies conducted by 26 industry-funded scientists. These 26 industry-funded scientists. These 27 mumber of studies conducted by 28 industry-funded scientists. These 29 page 39 page 30 pagencies or defend litigation claims 4 concerning toxic exposure. 30 pagencies or defend litigation claims 4 concerning toxic exposure. 31 plaintiff experts. 32 plaintiff experts. 33 plaintiff experts. 34 plaintiff experts. 35 plaintiff experts. 36 plaintiff experts. 36 plaintiff experts. 37 plaintiff experts. 38 plaintiff experts. 39 plaintiff experts. 30 plaintiff experts. 31 plaintiff experts. 30 plaintiff experts. 31 plaintiff experts. 30 plaintiff experts. 31 plaintiff experts. 32 plaintiff experts. 33 plaintiff experts. 31 plaintiff experts. 31 plaintiff experts. 31 plaintiff experts. 31 p	6	reviewer of Regulatory Toxicology and	6	MR. FROST: I'll try to
that journal.  Q. "Regulatory Toxicology and 1 Pharmacology is the official publication of the industry-funded International 3 Society of Regulatory Toxicology and 4 Pharmacology or ISRTP." Then it goes down into the second third paragraph. 5 down into the second third paragraph. 6 "IJOEH has chosen to publish this 7 exchange in order to alert readers to the 8 ways in which supposedly credible 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 21 to particular scientific points of view. 22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These  Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 10 And that was written by the editor-in-chief of this publication. 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look 21 CA. Yes. I'm looking at the 22 journal, though, sir. And this is a 23 letter, and it's signed by a number of 24 industry-funded scientists. These 25 manumber of industry's 26 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 4 concerning toxic exposure. 5 Without safeguards to 6 assure their independence of the 7 editor-in-chief of this publication. 10 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18	7	Pharmacology, correct?	7	remember that.
10 Q. "Regulatory Toxicology and Pharmacology is the official publication of the industry-funded International 12 Journals Division, Academic Press. A 2 Society of Regulatory Toxicology and 13 Society of Regulatory Toxicology and 14 Pharmacology or ISRTP." Then it goes 15 down into the second third paragraph. 15 Journals Division, Academic Press. A 2 Paul Weislogel, vice president, global 14 Pharmacology or ISRTP." Then it goes 14 Society, of Elsevier, Science, Inc. Are 2 you familiar with that publication? 17 exchange in order to alert readers to the 17 exchange in order to alert readers to the 18 ways in which supposedly credible 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 20 mame Elsevier Science, Inc.? A. Who is this now? 21 mame Elsevier Science, Inc.? A. Yes. I'm looking at the 20 journal, though, sir. And this is a 20 letter, and it's signed by a number of industry-funded scientists. These 24 industry-funded scientists. These 24 industry-funded scientists. These 24 industry-funded scientists are 24 concerning toxic exposure. Page 99 Page 1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. Without safeguards to 6 assure their independence of the 6 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." MR. FROST: Again, I object 10 to the use of what is clearly an opinion piece to try to establish 15 facts in this case and in 16 facts in this case and in 17 questioning this witness. 17 questioning is the official publication of a society of which 1 am not a member. 18 publication of a society of which 1 am not a member. 19 WR. SMITH: Q. Ma'am, do we need to go bac	8	A. I have reviewed papers for	8	BY MR. SMITH:
Page 99  studies later become part of industry-funded scientists. These  studies later become part of industry's efforts to influence federal regulatory a gencies or defend litigation claims concerning toxic exposure.  Without safeguards to Man And that was written by the editor-in-chief of this publication.  And that was written by the editor-in-chief of fthis publication.  Page Ms. Kirsten Chrisman, managing edite Journals Division, Academic Press. A Paul Weislogel, vice president, global Paul Weislogel, vice scientific literature.  A. Who is this now?  Q. Imight be pronouncing the scientific literature.  A. Who is this now?  Q. Imight personancing the scientific literature.  A. Who is this now?  Q. Ma'am, there's not a question on the table. I'm going to ask you a question though. Okay.  MR. FROST: Well, I think you asked	9	that journal.	9	Q. And then I want to go on
Page 99  studies later become part of industry-funded scientists. These  studies later become part of industry's efforts to influence federal regulatory a gencies or defend litigation claims concerning toxic exposure.  will deserved, is cast over studies and journals."  And that was written by the editor-in-chief of this publication.  Do you see that?  And that was written by the editor-in-chief of this publication.  The WITNESS: If I can  MS. O'DELL: "Object to the form"  THE WITNESS: If I can look  Town familiar with that publication 12  Journals Division, Academic Press. A Paul Weislogel, vice president, global 50  Journals Division, Academic Press. A Paul Weislogel, vice president, global 50  Journals Division, Academic Press. A Paul Weislogel, vice president, global 50  Journals Division, Academic Press. A Paul Weislogel, vice president, global 50  Journals Division, Academic Press. A Paul Weislogel, vice president, global 50  Journals Division, Academic Press. A Paul Weislogel, vice president, global 12  Journals Division, Academic Press. A Paul Weislogel, vice president, global 50  Society, of Elsevier, Science, Inc. 7  A. Who is this now?  Q. I might be pronouncing the nameElsevier Science, Inc.?  A. Yes. I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize of individuals,	10	Q. "Regulatory Toxicology and	10	further. It says, "November 19, 2002,
12 of the industry-funded International 13 Society of Regulatory Toxicology and 14 Pharmacology or ISRTP." Then it goes 15 down into the second third paragraph. 16 "IJOEH has chosen to publish this 17 exchange in order to alert readers to the 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 21 to particular scientific points of view. 22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These 25 mumber of studies conducted by 26 industry-funded scientists. These 27 The way in which supposedly credible 28 efforts to influence federal regulatory 29 agencies or defend litigation claims 20 concerning toxic exposure. 21 without safeguards to 22 efforts to influence federal regulatory 23 agencies or defend litigation claims 24 concerning toxic exposure. 25 "Without safeguards to 26 assure their independence of the 27 editorial process, suspicion, some of it 38 well deserved, is cast over studies and 39 journals." 30 And that was written by the 30 editor-in-chief of this publication. 31 Editor in the way of the didor-in-chief of this publication. 32 MR. FROST: Again, I object 33 MR. FROST: Again, I object 44 to the use of what is clearly an 45 opinion piece to try to establish 46 facts in this case and in 47 questioning this witness. 48 THE WITNESS: If I can 49 MS. O'DELL: "Object to the 50 form" 51 THE WITNESS: If I can look 51 Can and again, I want to emphasize that this publication of a society of which 62 I ma not a member. 63 Paul Weisloged, vice president, global in the scientific points of with that publication, Academic Press. A 64 Society, of Elsevier, Science, Inc. Ar 65 They publishe a lot of 67 Scientific Iterature. 68 A. Who is this now? 69 L might be pronouncing the 69 name Elsevier Science, Inc. ? 60 A. Yes. I'm looking at the 60 individuals, several whom I recognize 60 Anam, there's not a 61 question on the table. I'm going to ask 61 you asked me to look at this, and 62 a letter	11	Pharmacology is the official publication	11	Ms. Kirsten Chrisman, managing editor,
Society of Regulatory Toxicology and Pharmacology or ISRTP." Then it goes town into the second third paragraph.  The publish a chosen to publish this town into the second third paragraph.  The publish a lot of scientific literature.  Rechange in order to alert readers to the ways in which supposedly credible peer-reviewed journals may be co-opted by corporations seeking to give credibility to particular scientific points of view.  The publishes a large corporations seeking to give credibility to particular scientific points of view.  The publishes a large corporations seeking to give credibility to particular scientific points of view.  The publishes a large corporations seeking to give credibility to particular scientific points of view.  The publishes a large corporations seeking to give credibility to particular scientific points of view.  The publishes a large corporations seeking to give credibility to particular scientific points of view.  The publishe a lot of scientific literature.  A. Who is this now?  Q. I might be pronouncing the name Elsevier Science, Inc.?  A. Yes, I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize individuals, several whom I recognize provided and again, there's not a question on the table. I'm going to ask you a question though. Okay.  The WiTNESS: Well, I think you did ask a question.  The WiTNESS: Well, I think you asked me to look at this, and by our asked me to look at this, and a pion process, suspicion, some of it well deserved, is cast over studies and journals."  A. Who is this publication chains and point provided and again, there's not a question on the table. I'm going to ask you a question though. Okay.  MR. FROST: Well, I think you asked me to look at this, and I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emph	12		12	Journals Division, Academic Press. And a
14 Pharmacology or ISRTP." Then it goes down into the second third paragraph. 15 down into the second third paragraph. 16 "IJOEH has chosen to publish this 17 exchange in order to alert readers to the 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 21 to particular scientific points of view. 22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These  Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals."  And that was written by the editor-in-chief of this publication. 10 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look  14 Societty, of Elsevier, Science, Inc. Are you familiar with that publication? 16 They publish a lot of 5 scientific literature.  A. Who is this now? Q. I might be pronouncing the name Elsevier Science, Inc.? A. Who is this now? Q. I might be pronouncing the name Elsevier Science, Inc.? A. Who is this now? Q. I might be pronouncing the name Elsevier Science, Inc.? A. Who is this now? Q. I might be pronouncing the name Elsevier Science, Inc.? A. Who is this now? Q. I might be pronouncing the name Elsevier Science, Inc.? A. Who is this now? Q. I might be pronouncing the name Elsevier Science, Inc.? A. Wes, I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  Page  Page Page Page Page Page Page P	13	•	13	
down into the second third paragraph.  If a "IJOEH has chosen to publish this is "Inceptible to exchange in order to alert readers to the ways in which supposedly credible peer-reviewed journals may be co-opted by corporations seeking to give credibility to particular scientific points of view.  If a peer-reviewed journals may be co-opted by corporations seeking to give credibility to particular scientific points of view.  If a peer-reviewed journals may be co-opted by corporations seeking to give credibility to particular scientific points of view.  If a peer-reviewed journals may be co-opted by corporations seeking to give credibility and peer-reviewed journals may be co-opted by corporations seeking to give credibility and peer-reviewed journals may be co-opted by corporations seeking to give credibility and peer-reviewed journals may be co-opted by corporations seeking to give credibility and peer-reviewed journals may be co-opted by corporations seeking to give credibility and peer-reviewed letter, and it's signed by a number of industry-funded scientists. These  Page 99  If a studies later become part of industry's efforts to influence federal regulatory agencies or defend litigation claims concerning toxic exposure.  If a plaintiff experts.  Q. Ma'am, there's not a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question that bale. I'm going to ask you asked me to look at this, and journals."  A put If a publication that was written by the editor-in-chief of this publication.  A poyou see that?  A peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed opinion piece to try to establish facts in this case and in questioning this witness.  A peer-reviewed letter have and again, I want to emphasize that this publication of a society of which I am not a memb	14		14	
"IJOEH has chosen to publish this exchange in order to alert readers to the ways in which supposedly credible peer-reviewed journals may be co-opted by corporations seeking to give credibility corporations seeking to give credibility 20 corporations seeking to give credibility 21 to particular scientific points of view. 21 to particular scientific points of view. 22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These 24 industry-funded scientists. These 25 efforts to influence federal regulatory 26 agencies or defend litigation claims 27 agencies or defend litigation claims 28 concerning toxic exposure. 29 without safeguards to 29 assure their independence of the 29 ditorial process, suspicion, some of it 30 well deserved, is cast over studies and 30 journals." 30 you asked me to look at this, and 31 you asked me to look at this, and 32 you see that? 34 to the use of what is clearly an 34 to the use of what is clearly an 35 questioning this witness. 36 mR. FROST: Again, I object 36 facts in this case and in 37 questioning this witness. 38 mR. FROST: I can look 31 to make the official 32 publication of a society of which 32 to make the official 34 publication of a society of which 34 publication of a society of which 36 publication of a society of which 36 publication of a make the official 37 publication of a society of which 36 publication of a society of which 36 publication of a make the official 37 publication of a society of which 36 publication of a society of which 36 publication of a society of which 37 publication of a make the official 37 publication of a society of which 37 publication of a society of which 38 publication of a society of which 30 publication of a socie			15	• • • • • • • • • • • • • • • • • • • •
17 exchange in order to alert readers to the 18 ways in which supposedly credible 19 peer-reviewed journals may be co-opted by 20 corporations seeking to give credibility 21 to particular scientific points of view. 22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These  Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 9 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look  19 Q. I might be pronouncing the name Elsevier Science, Inc.? A. Yes. I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  Page  MR. FROST: Well, I think you asked me to look at this, and I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication of a society of which 15 and again, I want to emphasize that this publication of a society of which 16 I am not a member. 17 and the wis scientific literature.  18 A. Who is this name Elsevier Science, Inc.?  A. Yes. I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  1 plaintiff experts.  Q. Ma'am, there's not a question on the table. I'm going to ask you a question thou				
ways in which supposedly credible peer-reviewed journals may be co-opted by corporations seeking to give credibility 20 corporations seeking to give credibility 21 to particular scientific points of view. 21 A. Yes. I'm looking at the journal, though, sir. And this is a number of studies conducted by 23 letter, and it's signed by a number of industry-funded scientists. These 24 industry-funded scientists. These 25 letter, and it's signed by a number of industry-funded scientists. These 26 individuals, several whom I recognize 27 letter, and it's signed by a number of industry-funded scientists. These 27 letter, and it's signed by a number of individuals, several whom I recognize 28 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recognize 29 letter, and it's signed by a number of individuals, several whom I recogniz				
19 peer-reviewed journals may be co-opted by corporations seeking to give credibility 20 to particular scientific points of view. 21 to particular scientific points of view. 22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These 24 industry-funded scientists. These 25 true 26 industry-funded scientists. These 26 true 27 true 28 true 29 tr				
corporations seeking to give credibility to particular scientific points of view.  21 to particular scientific points of view.  22 "RTP publishes a large number of studies conducted by industry-funded scientists. These  23 letter, and it's signed by a number of individuals, several whom I recognize  Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals."  10 And that was written by the 10 editor-in-chief of this publication. 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look 21 name Elsevier Science, Inc.? A. Yes. I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  Retter, and it's signed by a number of individuals, several whom I recognize  Page  Page  Page  Page  Page  Page  Page  Page  NR. Yes. I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  Page 99  Page  Page  NR. Yes I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  NR. FROST: Well, I think you aked me to look at this, and you asked me to look at this, and I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member.  BY MR. SMITH:  20 MR. and the Yes. I'm look in the jou				
to particular scientific points of view.  "RTP publishes a large number of studies conducted by industry-funded scientists. These  Page 99  studies later become part of industry's efforts to influence federal regulatory agencies or defend litigation claims concerning toxic exposure.  "Without safeguards to assure their independence of the editorial process, suspicion, some of it well deserved, is cast over studies and journals."  A. Yes. I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  Page  Page  Page  Q. Ma'am, there's not a question on the table. I'm going to ask you a question though. Okay.  MR. FROST: Well, I think you did ask a question.  THE WITNESS: Well, I think you asked me to look at this, and I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It correctly an opinion piece to try to establish facts in this case and in questioning this witness.  THE WITNESS: If I can - MS. O'DELL: "Object to the MS. O'DELL: "Object to the form"  THE WITNESS: If I can look  A. Yes. I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  A. Yes. I'm looking at the journal, though, sir. And this is a letter, and it's signed by a number of individuals, several whom I recognize  Q. Ma'am, there's not a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question though. Okay.  I have life to the pount in the table. I'm going to ask you a question to a pu			1	
22 "RTP publishes a large 23 number of studies conducted by 24 industry-funded scientists. These  Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals."  And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look 22 journal, though, sir. And this is s letter, and it's signed by a number of individuals, several whom I recognize 23 letter, and it's signed by a number of individuals, several whom I recognize 24 individuals, several whom I recognize 24 individuals, several whom I recognize 25 letter, and it's signed by a number of individuals, several whom I recognize 26 letter, and it's signed by a number of individuals, several whom I recognize 24 individuals, several whom I recognize 26 letter, and it's signed by a number of individuals, several whom I recognize 26 letter, and it's signed by a number of individuals, several whom I recognize 27 letter, and it's signed by a number of individuals, several whom I recognize 28 letter, and it's signed by a number of individuals, several whom I recognize 29 Letter, and it's signed by a number of individuals, several whom I recognize 20 Ma'am, there's not a question on the table. I'm going to ask question on the				
page 99  range 99  studies later become part of industry's efforts to influence federal regulatory agencies or defend litigation claims concerning toxic exposure.  "Without safeguards to editorial process, suspicion, some of it well deserved, is cast over studies and journals."  And that was written by the editor-in-chief of this publication.  And that was written by the editor-in-chief of this publication.  MR. FROST: Again, I object to the use of what is clearly an opinion piece to try to establish facts in this case and in questioning this witness.  THE WITNESS: If I can MS. O'DELL: "Object to the condition industry's industry's industry funded scientists. These  Page 99  Page 19  Q. Ma'am, there's not a question on the table. I'm going to ask you a question on the table. I'm going to ask you a question though. Okay.  The WITNESS: Well, I think you idia ask a question.  The Witness here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member.  Page 4  Page 4  Page 99  Page 4  Page 4  Page 4  Page 4  Page 4  Page 7  Page				
Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 4 you a question though. Okay. 5 "Without safeguards to 6 assure their independence of the 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 9 I would give this, based upon the 10 And that was written by the 11 editor-in-chief of this publication. 11 a peer-reviewed letter. And that 12 Do you see that? 12 it's not relevant. It looks like 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 15 and again, I want to emphasize 16 facts in this case and in 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 20 BY MR. SMITH: 21 THE WITNESS: If I can look 21 Q. Ma'am, do we need to go bace 24 individuals, several whom I recognize individuals, several whom I recognize 24 individuals, several whom I aplaintiff experts. 20 Ma'am, there's not a question on the table. I'm going to ask a question on the table. I'm going to ask a question on the table. I'm going to ask a question on the table. I'm going to ask a question on the table. I'm going to ask a question on the table. I'm going to ask a question on the table. I'm guestion that able. I'm going to ask a				
Page 99  1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 4 you a question on the table. I'm going to ask you a question though. Okay. 5 "Without safeguards to 5 MR. FROST: Well, I think you did ask a question. 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 9 I would give this, based upon the 10 And that was written by the 10 signatures here, that this is not 11 editor-in-chief of this publication. 11 a peer-reviewed letter. And that 12 Do you see that? 12 it's not relevant. It looks like 13 MR. FROST: Again, I object 13 a letter that was written. It 14 to the use of what is clearly an 15 opinion piece to try to establish 15 and again, I want to emphasize 16 facts in this case and in 16 that this publication that you're 17 questioning this witness. 17 questioning is the official 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 19 I am not a member. 19 BY MR. SMITH: 19 Q. Ma'am, do we need to go back 19 destroy and 10 destroy in the 10 plaintiff experts. 20 Q. Ma'am, do we need to go back 10 plaintiff experts. 20 given and again, I want to emphasize 16 form" 20 BY MR. SMITH: 20 Ms and we need to go back 21 plaintiff experts. 20 Ms and again, I want do enable to go back 21 plaintiff experts. 20 Ms and again, I want to emphasize 20 Ms and again, I want to emphasize 20 Ms. O'DELL: "Object to the 20 Ms. O'DELL: "Object to the 20 Ms. O'DELL: "Object to the 20 Ms. Alam, do we need to go back 21 Ns. O'DELL: "Object to the 21 Q. Ma'am, do we need to go back 21 Ns. O'DELL: "Object to the 21 Q. Ma'am, do we need to go back 21 Ns. O'DELL: "Object to the 21 Q. Ma'am, do we need to go back 21 Ns. O'DELL: "Object to the 22 Ns. O'DELL: "Object to the 21 Q. Ma'am, do we need to go back 21 Ns. O'DELL: "Object to the 22 Ns. O'DELL: "Object to the 23 Ns. O'DELL: "Object to the 24 Ns. O'DELL: "Object to the 25 Ns. O'DELL: "Object to the 25 Ns. O'DELL: "Object to the 25		•	1	
1 studies later become part of industry's 2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 10 And that was written by the 10 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look 2 Q. Ma'am, there's not a question on the table. I'm going to ask question. I hund dive this, based upon the signatures here, that this is not a peer-reviewed letter. And that to the use of wha	∠ <del>4</del>	industry-funded scientists. These	2 <del>4</del>	individuals, several whom I recognize as
2 efforts to influence federal regulatory 3 agencies or defend litigation claims 4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 10 And that was written by the 10 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look 2 Q. Ma'am, there's not a question on the table. I'm going to ask question though. Okay.  MR. FROST: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you asked me to look at this, and I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member.  BY MR. SMITH: Q. Ma'am, do we need to go back		Page 99		Page 101
agencies or defend litigation claims  deconcerning toxic exposure.  Without safeguards to assure their independence of the editorial process, suspicion, some of it well deserved, is cast over studies and journals."  And that was written by the editor-in-chief of this publication.  Do you see that?  MR. FROST: Well, I think you did ask a question.  THE WITNESS: Well, I think you asked me to look at this, and you asked me to look at this, and it would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like AMR. FROST: Again, I object MR. FROST: Again, I object to the use of what is clearly an opinion piece to try to establish facts in this case and in opinioning this witness.  THE WITNESS: If I can- MS. O'DELL: "Object to the form"  THE WITNESS: If I can look  MR. FROST: Well, I think you a question though. Okay.  MR. FROST: Well, I think you did ask a question.  THE WITNESS: Well, I think you advestion though. Okay.  MR. FROST: Well, I think you did ask a question.  THE WITNESS: Well, I think you advestion though. Okay.  MR. FROST: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: Well, I think you did ask a question.  THE WITNESS: If I can follow	1	studies later become part of industry's	1	plaintiff experts.
agencies or defend litigation claims  4 concerning toxic exposure.  5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals."  10 And that was written by the 10 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look  3 question on the table. I'm going to ask you a question though. Okay.  4 you a question though. Okay.  5 MR. FROST: Well, I think you did ask a question.  7 THE WITNESS: Well, I think you asked me to look at this, and you asked me to look at th	2		2	Q. Ma'am, there's not a
4 concerning toxic exposure. 5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 10 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look 2 you a question though. Okay.  MR. FROST: Well, I think you did ask a question.  THE WITNESS: Well, I thinl a poul asked me to look at this, and if would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed a letter that was wr	3	agencies or defend litigation claims	3	question on the table. I'm going to ask
5 "Without safeguards to 6 assure their independence of the 7 editorial process, suspicion, some of it 8 well deserved, is cast over studies and 9 journals." 10 And that was written by the 11 editor-in-chief of this publication. 12 Do you see that? 13 MR. FROST: Again, I object 14 to the use of what is clearly an 15 opinion piece to try to establish 16 facts in this case and in 17 questioning this witness. 18 THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look  5 MR. FROST: Well, I think 29 you did ask a question. 7 THE WITNESS: Well, I think 29 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 20 you did ask a question. 7 THE WITNESS: Well, I think 21 you did ask a question. 7 THE WITNESS: Well, I think 22 you did ask a question. 7 THE WITNESS: Well, I think 24 you did ask a question. 7 THE WITNESS: Well, I think 24 you did ask a question. 7 THE WITNESS: Well, I think 24 you asked me to look at this, and 15 us of look at this, and 16 that this path was written by the 10 a peer-reviewed letter. And that 12 crtainly was not peer-reviewed 15 a letter that was written. It 14 certainly was not peer-reviewed 15 and again, I want to emphasize 16 that this publication that you're 17 questioning is the official 18 publication of a society of which 19 I am not a member. 19 BY MR. SMITH: 20 MR. SMITH: 20 MR. SMITH: 21 Q. Ma'am, do we need to go bac	4		4	you a question though. Okay.
assure their independence of the editorial process, suspicion, some of it well deserved, is cast over studies and journals."  And that was written by the ceditor-in-chief of this publication.  Do you see that?  MR. FROST: Again, I object  MR. FROST: Again, I object  to the use of what is clearly an opinion piece to try to establish facts in this case and in questioning this witness.  THE WITNESS: Well, I thinl you asked me to look at this, and I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize facts in this case and in questioning this witness.  THE WITNESS: If I can  MS. O'DELL: "Object to the form"  THE WITNESS: If I can look  MS MR. SMITH:  THE WITNESS: If I can look  OMA'am, do we need to go back	5	"Without safeguards to	5	MR. FROST: Well, I think
ditorial process, suspicion, some of it well deserved, is cast over studies and journals."  And that was written by the editor-in-chief of this publication.  Do you see that?  MR. FROST: Again, I object to the use of what is clearly an questioning this witness.  THE WITNESS: Well, I think you asked me to look at this, and I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning this witness.  THE WITNESS: If I can las publication of a society of which I am not a member.  BY MR. SMITH:  THE WITNESS: If I can look  And that was written by the you asked me to look at this, and you asked me to lo			6	you did ask a question.
well deserved, is cast over studies and journals."  And that was written by the editor-in-chief of this publication.  Do you see that?  MR. FROST: Again, I object to the grain opinion piece to try to establish THE WITNESS: If I can look  Well deserved, is cast over studies and journals."  I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning this witness.  THE WITNESS: If I can la publication of a society of which I am not a member.  BY MR. SMITH:  THE WITNESS: If I can look  BY MR. SMITH:  Q. Ma'am, do we need to go back	7	•	7	THE WITNESS: Well, I think
journals."  And that was written by the editor-in-chief of this publication.  Do you see that?  MR. FROST: Again, I object to the use of what is clearly an opinion piece to try to establish facts in this case and in questioning this witness.  THE WITNESS: If I can  form"  THE WITNESS: If I can look  I would give this, based upon the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member. BY MR. SMITH: Q. Ma'am, do we need to go back	8	* * *	8	you asked me to look at this, and
And that was written by the editor-in-chief of this publication. Do you see that?  MR. FROST: Again, I object to the use of what is clearly an opinion piece to try to establish facts in this case and in rule questioning this witness.  THE WITNESS: If I can form"  THE WITNESS: If I can look  And that was written by the signatures here, that this is not a peer-reviewed letter. And that it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member. BY MR. SMITH: Q. Ma'am, do we need to go back			9	I would give this, based upon the
ditor-in-chief of this publication.  Do you see that?  MR. FROST: Again, I object  to the use of what is clearly an opinion piece to try to establish facts in this case and in questioning this witness.  THE WITNESS: If I can form"  THE WITNESS: If I can look  po you see that?  12 it's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member.  BY MR. SMITH: Q. Ma'am, do we need to go back			10	
Do you see that?  MR. FROST: Again, I object  to the use of what is clearly an opinion piece to try to establish facts in this case and in questioning this witness.  THE WITNESS: If I can form"  THE WITNESS: If I can look  It's not relevant. It looks like a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member. BY MR. SMITH: Q. Ma'am, do we need to go back			11	
MR. FROST: Again, I object to the use of what is clearly an opinion piece to try to establish facts in this case and in questioning this witness.  THE WITNESS: If I can form" THE WITNESS: If I can look  MR. FROST: Again, I object  13 a letter that was written. It certainly was not peer-reviewed and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member. BY MR. SMITH: Q. Ma'am, do we need to go back		•		•
to the use of what is clearly an opinion piece to try to establish 15 and again, I want to emphasize facts in this case and in questioning this witness. 17 questioning is the official publication of a society of which MS. O'DELL: "Object to the form" 20 BY MR. SMITH: 21 THE WITNESS: If I can look 21 Q. Ma'am, do we need to go back."			1	
opinion piece to try to establish facts in this case and in questioning this witness.  THE WITNESS: If I can  MS. O'DELL: "Object to the form"  THE WITNESS: If I can look  THE WITNESS: If I can look  Opinion piece to try to establish  15 and again, I want to emphasize that this publication that you're questioning is the official publication of a society of which I am not a member.  BY MR. SMITH: Q. Ma'am, do we need to go back				
facts in this case and in questioning this witness.  THE WITNESS: If I can 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look  16 that this publication that you're questioning is the official 17 publication of a society of which 19 I am not a member. 20 BY MR. SMITH: 21 Q. Ma'am, do we need to go bac			1	
17questioning this witness.17questioning is the official18THE WITNESS: If I can18publication of a society of which19MS. O'DELL: "Object to the19I am not a member.20form"20BY MR. SMITH:21THE WITNESS: If I can look21Q. Ma'am, do we need to go bac				
THE WITNESS: If I can  18 publication of a society of which 19 MS. O'DELL: "Object to the 20 form" 21 THE WITNESS: If I can look 21 Q. Ma'am, do we need to go bac				
19 MS. O'DELL: "Object to the 20 form" 20 BY MR. SMITH: 21 THE WITNESS: If I can look 21 Q. Ma'am, do we need to go back."		1 0	1	
20 form" 20 BY MR. SMITH: 21 THE WITNESS: If I can look 21 Q. Ma'am, do we need to go bac			1	•
THE WITNESS: If I can look 21 Q. Ma'am, do we need to go bac			1	
, , , , , , , , , , , , , , , , , , , ,				
44 at the 1 44 to voir UV again where voil were liste			1	
				•
r				= = = = = = = = = = = = = = = = = = = =
24 appropriate objection. 24 A. I did not review this	<b>∠</b> 4	арргориате објесноп.	24	A. I did not review this

26 (Pages 98 to 101)

	Page 102		Page 104
1	publication.	1	trade association that have direct
2	Q. You're not a you're not a	2	incentive to minimize the regulatory
3	peer reviewer of Regulatory Toxicology	3	burden on industry, Bullet Point 2.
4	and Pharmacology?	4	"A significant percentage of
5	A. I, in the past, through	5	members of the RTP editorial board have
6	perhaps 40 years, have reviewed papers	6	financial ties to companies whose
7	for them.	7	products or byproducts are the subject of
8	Q. And that's the extent	8	studies published by the RTP."
9	A. It could have been one or	9	Next, down at the bottom of
10	Q. That's your extent of	10	Page 387, "RTP editorial's commonly
11	involvement with Regulatory Toxicology	11	support industry, antiregulatory goals."
12	and Pharmacology?	12	Next bullet point: "RTP
13	A. I have never been on their	13	serves as a convenient venue for
14	editorial board, and I know little about	14	publication of industry research and
15	,	15	- · ·
16	the journal. I'm not a member of the	16	gives the credibility of a peer-reviewed journal to articles that may not have
16 17	society of that disseminates this	17	been subjected to full and meaningful
	journal.	18	
18 19	Q. I'm going to read the	19	independent review."
	document, "Dear Ms. Chrisman and Mr.	20	Next bullet point: "RTP
20 21	Weislogel, we write you to express our	21	routinely fails to disclose relevant conflicts of interest."
	concerns about apparent conflicts of	22	
22	interest, lack of transparency, and the	1	Then it goes on to the next
23	absence of editorial independence of the	23	section. "Given the considerable
24	Journal of Regulatory Toxicology and	24	industry support received by ISRTP, RTP's
	Page 103		Page 105
1	Pharmacology, RTP, which you publish.	1	industry oriented editorial board, the
2	"As you know, that journal	2	too-frequent antiregulatory tenor of
3	is the official publication of the	3	RTP's editorials, and the preponderance
4	International Society of Regulatory	4	of publications by industry-funded
5	Toxicology and Pharmacology or ISRTP.	5	scientists, we urge Academic
6	Our concerns about Regulatory Toxicology	6	Press/Elsevier to" I'm mispronouncing
7	and Pharmacology include:"	7	that name "to increase the credibility
8	Bullet point, "The journal's	8	of the journal by insisting that RTP, (1)
9	apparent bias in favor of industries that	9	sever its ties to the industry-sponsored
10	are subject to governmental health and	10	ISRTP; (2) reconstitute its advisory
11	environmental regulations that provide	11	1 1, 1 , 11 1 ,1
		++	board to dramatically reduce the
12	financial support to RTP's sponsor,	12	influence of industry scientists,
12 13			influence of industry scientists, industry lawyers, and academic
	financial support to RTP's sponsor,	12	influence of industry scientists,
13 14 15	financial support to RTP's sponsor, ISRTP.	12 13	influence of industry scientists, industry lawyers, and academic
13 14	financial support to RTP's sponsor, ISRTP.  "ISRTP is supported by,	12 13 14	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an
13 14 15	financial support to RTP's sponsor, ISRTP. "ISRTP is supported by, among others, the American Chemical	12 13 14 15	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an editorial policy about conflicts of
13 14 15 16	financial support to RTP's sponsor, ISRTP.  "ISRTP is supported by, among others, the American Chemical Council" "Chemistry Council,	12 13 14 15 16	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an editorial policy about conflicts of interest."
13 14 15 16 17	financial support to RTP's sponsor, ISRTP.  "ISRTP is supported by, among others, the American Chemical Council" "Chemistry Council, Bristol-Myers Squibb Company, Dow	12 13 14 15 16 17	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an editorial policy about conflicts of interest."  And then at the end of
13 14 15 16 17 18	financial support to RTP's sponsor, ISRTP.  "ISRTP is supported by, among others, the American Chemical Council" "Chemistry Council, Bristol-Myers Squibb Company, Dow AgroSciences, Eastman Kodak, Gillette	12 13 14 15 16 17 18	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an editorial policy about conflicts of interest."  And then at the end of the of this letter in this
13 14 15 16 17 18 19	financial support to RTP's sponsor, ISRTP.  "ISRTP is supported by, among others, the American Chemical Council" "Chemistry Council, Bristol-Myers Squibb Company, Dow AgroSciences, Eastman Kodak, Gillette Company, In-Spec Chemical Corporation.	12 13 14 15 16 17 18 19	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an editorial policy about conflicts of interest."  And then at the end of the of this letter in this peer-reviewed journal, it has signed by
13 14 15 16 17 18 19 20	financial support to RTP's sponsor, ISRTP.  "ISRTP is supported by, among others, the American Chemical Council" "Chemistry Council, Bristol-Myers Squibb Company, Dow AgroSciences, Eastman Kodak, Gillette Company, In-Spec Chemical Corporation. Merck & Co., Inc., Procter & Gamble,	12 13 14 15 16 17 18 19 20	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an editorial policy about conflicts of interest."  And then at the end of the of this letter in this peer-reviewed journal, it has signed by one let's see. One, two, three, four
13 14 15 16 17 18 19 20 21	financial support to RTP's sponsor, ISRTP.  "ISRTP is supported by, among others, the American Chemical Council" "Chemistry Council, Bristol-Myers Squibb Company, Dow AgroSciences, Eastman Kodak, Gillette Company, In-Spec Chemical Corporation. Merck & Co., Inc., Procter & Gamble, R.J. Reynolds Tobacco Company, The	12 13 14 15 16 17 18 19 20 21	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an editorial policy about conflicts of interest."  And then at the end of the of this letter in this peer-reviewed journal, it has signed by one let's see. One, two, three, four 32, excuse me, that's another page.
13 14 15 16 17 18 19 20 21	financial support to RTP's sponsor, ISRTP.  "ISRTP is supported by, among others, the American Chemical Council" "Chemistry Council, Bristol-Myers Squibb Company, Dow AgroSciences, Eastman Kodak, Gillette Company, In-Spec Chemical Corporation. Merck & Co., Inc., Procter & Gamble, R.J. Reynolds Tobacco Company, The Sapphire Group, Inc., Schering-Plough	12 13 14 15 16 17 18 19 20 21 22	influence of industry scientists, industry lawyers, and academic consultants to industry; and (3) adopt an editorial policy about conflicts of interest."  And then at the end of the of this letter in this peer-reviewed journal, it has signed by one let's see. One, two, three, four 32, excuse me, that's another page. It goes onto the next page.

27 (Pages 102 to 105)

States and around the world, from different institutions, different hospitals - do you see that, Doctor? MR. FROST: I'm going to object. Wonderful testimony you list gave. Again I'm going to object to the use of an opinion piece. I'll object to just reading from something that, first off is MR. SMITH: Just state your objection. Idon't need a speaking objection. MR. FROST: - second MR. SMITH: I don't need a speaking objection. MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper. And as Dr. Mossman said, she's never seen this before. And we've already established that that is igust an opinion piece that's signed on by several  Page 107  plaintiffs' attorneys. Answer your question MR. SMITH: Look, I'm going to let I'm going to let you go. There are no more speaking objections, I'm going to let t I'm going to let you go. There are no more speaking objection, but we're not going to have speaking objections. MR. RROST: Well, well see. I mean, I've as I've said, I just I'm objecting to the proprietary of even using, you know, this example. Just stitting there and reading a a letter into the record and not asking a question about it, is not the proper MR. SMSTH: I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to call 20 MR. SMSTH: Look present and the more are a				
different institutions, different hospitals do you see that, Doctor?  MR. FROST: I'm going to object. Wonderful testimony you joing to object. Wonderful testimony you joing to object to gust gave.  Again I'm going to object to the use of an opinion piece. I'll so object to just reading from something that, first off is MR. SMITH: Just state your objection. I don't need a speaking objection.  MR. SMITH: Just state your objection. Idon't need a speaking objection.  MR. SMITH: Idon't need a speaking objection.  MR. FROST: But think this entire line of questioning, quite 19 frankly, is completely improper. 20 And as Dr. Mossman said, 21 she's never seen this before. And we've already established that 23 this is just an opinion piece 24 that's signed on by several  Page 107  plaintiffs' attorneys. Answer your question Work and the phone. You can speak you can voice your objection, but we're now. I mean okay. All right. BY MR. SMITH: BY MR. SMITH: By MR. SMITH: Objection in the phone. When the phone is the proprietary of even using, you have yet already established proper word of the editorial board of this journal. And that I do recognize.  Page 107  Page 107  Page 107  Page 109  Chave you seen this piece, Doctor?  A I have not. And I'm not a member of the editorial board of this journal. And that I do recognize.  Q. Okay.  Page 107  Page 107  Page 107  Page 109  Page 10		Page 106		Page 108
different institutions, different hospitals do you see that, Doctor?  MR. FROST: I'm going to object. Wonderful testimony you joing to object. Wonderful testimony you joing to object to gust gave.  Again I'm going to object to the use of an opinion piece. I'll so object to just reading from something that, first off is MR. SMITH: Just state your objection. I don't need a speaking objection.  MR. SMITH: Just state your objection. Idon't need a speaking objection.  MR. SMITH: Idon't need a speaking objection.  MR. FROST: But think this entire line of questioning, quite 19 frankly, is completely improper. 20 And as Dr. Mossman said, 21 she's never seen this before. And we've already established that 23 this is just an opinion piece 24 that's signed on by several  Page 107  plaintiffs' attorneys. Answer your question Work and the phone. You can speak you can voice your objection, but we're now. I mean okay. All right. BY MR. SMITH: BY MR. SMITH: By MR. SMITH: Objection in the phone. When the phone is the proprietary of even using, you have yet already established proper word of the editorial board of this journal. And that I do recognize.  Page 107  Page 107  Page 107  Page 109  Chave you seen this piece, Doctor?  A I have not. And I'm not a member of the editorial board of this journal. And that I do recognize.  Q. Okay.  Page 107  Page 107  Page 107  Page 109  Page 10	1	States and around the world, from	1	do we have a Special Master in
hospitals do you see that, Doctor?  MR. FROST: I'm going to object. Wonderful testimony you just gave.  Again I'm going to object to the use of an opinion piece. I'll object to just reading from 50 conceining that, first off is 11 MR. SMITH: Just state your 51 conceining that, first off is 12 cobjection. I don't need a speaking objection.  MR. FROST: second 14 point of the speaking objection. I don't need a speaking objection.  MR. FROST: second 14 point out, are people who many of whom a speaking objection. MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper. 20 And as Dr. Mossman said, she's never seen this before. And 22 we've already established that 123 this is just an opinion piece 24 that's signed on by several  Page 107  plaintiffs' attorneys. Answer your question 3 MR. SMITH: Look, I'm going to let I'm going to let you go. 5 There are no more speaking objections, but we're not going to have speaking objection, but we're not going to have speaking objection, but we're not going to have speaking objection, but we're not going to have speaking objections this first of the proprietary of even using, you should like the proprietary of even using, you habout it, is not the proper 20 MR. SMITH: I'll get the 21 Court involved. If you're going 22 to continue to speak, do speaking 23 objection, I'm going to call 23 polyections, I'm going to continue to speak, do speaking 23 objections, I'm going to call 23 polyections, I'm going to continue to speak, do speaking 23 objections, I'm going to call 23 polyections, I'm going to call 24 polyections, I'm going to continue to speak, do speaking 23 objections, I'm going to call 24 polyections, I'm going to call 24 polyections, I'm going to call 25 polyections, I'm going to call 25 polyections, I'm going to call 26 polyections, I'm going to call 27 polyections, I'm going to call 28 polyections, I'm going to call 28 polyections, I'm going to call 28 polyections			2	<u>*</u>
MR. FROST: I'm going to object. Wonderful testimony you just gave.  Again I'm going to object to the use of an opinion piece. I'll object to just reading from something that, first off is MR. SMITH: J don't need a speaking objection.  MR. FROST: second MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper.  And as Dr. Mossman said, she's never seen this before. And we've already established that this is just an opinion piece that's signed on by several  plaintiffs' attorneys. Answer your question MR. SMITH: Look, I'm going to let I'm going to let you go. There are no more speaking objections, but we're not going to have speaking objection, but we're not going to have speaking objection, but we're not going to have speaking objections, but we're not going to have speaking objections.  MR. FROST: Well, we'll see. I mean, I've as I've said, I right.  MR. SMITH: Hi right. So I've wared you, I've done it twice now. I mean okay. All right. The twice now. I mean okay. All right.  A l- have not. And I'm not a member of the editorial board of this journal. And these individuals, as I point out, are people who many of whom are involved as plaintiff expert winesses in litigation. And that I do recognize.  Q. Okay.  A I would also Q. I know you said I'm sorry?  A I I also want to bring up the point that International Journal of Occupational and Environmental Health,  Page 109  I'm not sure that journal still exists.  If this is the one, as the letter is signed, that Dr. Egilman was editor of this journal, has been dropped by the pathogenic potential of asbestiform particulates (cleavage fragments) in in vitro (cell or organ culture) models and bioassays"?  A Yes. I that was the paper that I published in the Regulatory Toxicology and Pharmacology publication that twe just went over	3	· · · · · · · · · · · · · · · · · · ·	3	MS. O'DELL: Yes.
beject. Wonderful testimony you just gave.  Again I'm going to object to the use of an opinion piece. I'll object to just reading from something that, first off is  I objection. I don't need a objection. I don't need a speaking objection.  MR. FROST: - second  MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper.  And as Dr. Mossman said, and we've already established that this is just an opinion piece that's signed on by several  Page 107  plaintiffs' attorneys. Answer your question  your question  MR. SMITH: Look, I'm going to let I'm going to get the Court on the phone.  You can speak you can voice your objection, but we're not going to have speaking objection.  MR. FROST: Well, we'll see. I mean, I've a letter is signed, that Dr. Egilman was editor of this journal. And that I do recognize.  Page 107  Page 107  Page 108  Page 109  P	4		4	MR. SMITH: All right. So
6 Just gave. Again I'm going to object to the use of an opinion piece. I'll 9 object to just reading from 10 something that, first off is 11 MR. SMITH: Just state your 12 objection. I don't need a 13 speaking objection. 14 MR. FROST: second 15 MR. SMITH: I don't need a 16 speaking objection. 17 MR. FROST: But I think this 18 entire line of questioning, quite 19 frankly, is completely improper. 20 And as Dr. Mossman said, 21 she's never seen this before. And we've already established that 22 we've already established that 23 this is just an opinion piece 24 that's signed on by several  Page 107  plaintiffs' attorneys. Answer 2 your question 2 your question 3 MR. SMITH: Look, I'm going 4 to let I'm going to let you go. 5 There are no more speaking 6 objections, otherwise, I'm going 7 to get the Court on the phone. 8 You can speak you can voice 9 your objection, but we're not 10 going to have speaking objections. 11 MR. FROST: Well, we'll see. 12 I mean, I've as I've said, I 13 just I'm objecting to the 14 proprictary of even using, you 15 know, this example. 16 Just sitting there and 17 reading a a letter into the 18 record and not asking a question 19 about it, is not the proper 20 MR. SMITH: Ilg et the 21 Court involved. If you're going 22 to continue to speak, do speaking 23 objections, I'm going to call 24 that's signed on by seeral 25 objections, I'm going to call 26 MR. SMITH: Ilg et the 27 Court involved. If you're going 28 to continue to speak, do speaking 29 objections, I'm going to call 20 MR. SMITH: Ilg et the 20 Court involved. If you're going 21 to continue to speak, do speaking 22 objections, I'm going to call 24 Dector?  A I have not. And I'm not a member of the editorial board of this journal. And these individuals, as I point out, are people who many of whom are involved as plaintiff expert  member of the editorial board of this journal. And these individuals, as I popint out, are people who many of whom are involved as plaintiff expert  point ou	5		5	
The work of an opinion piece. I'll object to just reading from something that, first off is — 10 something that, first off is — 11 MR. SMITH: Just state your objection. I don't need a speaking objection or the phone.  Page 107  Page 107  Page 107  Page 108  Page 109  Pag			6	
the use of an opinion piece. I'll object to just reading from something that, first off is — 10 Doctor?  MR. SMITH: Just state your objection. I don't need a speaking objection.  MR. FROST: — second — 14 member of the editorial board of this journal. And these individuals, as I point out, are people who — many of whom are involved as plaintiff expert witnesses in litigation. And that I do recognize.  MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper.  MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper.  MR. FROST: Well about a this is just an opinion piece that's signed on by several  Page 107  plaintiffs' attorneys. Answer your question— 22 your question— 23 MR. SMITH: Look, I'm going to let I'm going to let you go. 5 There are no more speaking objections; otherwise, I'm going to get the Court on the phone. 8 You can speak — you can voice your objection, but we're not going to have speaking objections. 11 MR. FROST: Well, we'll see. 12 I mean, I've — as I've said, I just — I'm objecting to the your of even using, you know, this example. 15 know, this example. 16 Just sitting there and 17 reading a — a letter into the record and not asking a question about it, is not the proper — MR. SMITH: II get the 20 MR. FROST: Form. 17 He WITNESS: I just said that. 19 WM. FROST: Well get the Court on the phone. 19 Amount of the pathogenic potential of asbestiform versus non-asbestiform particulates (cleavage fragments) in in vitro (cell or organ culture) models and bioassays"? A. Yes. I — that was the paper that I published in this journal. 20 And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this? 21 Government of the pathogenic potential of asbestiform and Pharmacology publication that we just went over all this? 22 went over all this? 23 by MR. SMITH: 10 over 23 by MR. SMITH: 10 over 23 by MR. SMITH: 10 over 24 by MR. FROST: Form. 11 THE WITNESS: I just said that. 12			7	
9 object to just reading from something that, first off is  11 MR. SMITH: Just state your objection. I don't need a speaking objection.  12 objection. I don't need a speaking objection.  13 speaking objection.  14 MR. FROST: second  15 MR. SMITH: I don't need a speaking objection.  16 MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper.  19 And as Dr. Mossman said, 21 she's never seen this before. And we've already established that this is just an opinion piece that's signed on by several  10 plaintiffs' attorneys. Answer your question  11 plaintiffs' attorneys. Answer your question  12 your question  13 MR. SMITH: Look, I'm going objections, objections, otherwise, I'm going to let you go.  14 There are no more speaking objection, but we're not ogoing to have speaking objections. MR. FROST: Well, we'll see. I man, I've as I've said, I just I'm objecting to the proprietary of even using, you freading a a letter into the record and not asking a question about it, is not the proper  MR. SMITH: I'm don't need a speaking objections, I'm going to call  10 going to have speaking objections. MR. FROST: Well, we'll see. I man, I've as I've said, I reading a a letter into the record and not asking a question about it, is not the proper  MR. SMITH: I'll get the Court involved. If you're going to continue to speak, do speaking objections, I'm going to call  10 goiections, I'm going to call  10 Just sitting there and reading a a letter into the record and not asking a question about it, is not the proper  MR. SMITH: I'll get the Court involved. If you're going to continue to speak, do speaking objections, I'm going to call  10 goiections, I'm going to call  10 Just told me earlier into the record and not asking a question about it, is not the proper and proper a			8	
10   Something that, first off is   10   MR. SMITH: Just state your objection. I don't need a speaking objection. I don't need a speaking objection.   13   14   MR. FROST: second   15   MR. SMITH: I don't need a speaking objection.   16   Speaking objection.   16   Speaking objection.   17   MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper.   19   Garage of the self-second and we've already established that she's never seen this before. And we've already established that this is just an opinion piece   23   this is just an opinion piece   23   that's signed on by several   1   Page 107   Page 109    1			9	
MR. ŠMITH: Just state your objection. I don't need a speaking objection.  MR. FROST: - second  MR. SMITH: I don't need a speaking objection.  MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper.  And as Dr. Mossman said, she's never seen this before. And we've already established that this is just an opinion piece that's signed on by several this is just an opinion piece that's signed on by several this is just an opinion piece that's signed on by several to let I'm going to better in going to have speaking objections, but we're not going to have speaking objection, but we're not going to have speaking objection, but we're not reading a a letter into the record and not asking a question and speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to continue to speak, do speaking objections, I'm going to call  A. I have not. And I'm not a member of the editorial board of the is journal, and these individuals, as I point out, are people who many of whom are involved as plaintiff expert witnesses in litigation. And that I do recognize.  A. I would also  Q. Okay.  A. I I also want to bring up the point that International Journal of Occupational and Environmental Health,  Page 107  Page 108  Page 109  Page 1				
12 objection. I don't need a 13 speaking objection.  14 MR. FROST: — second — 15 MR. SMITH: I don't need a 16 speaking objection.  17 MR. FROST: But I think this 18 entire line of questioning, quite 19 frankly, is completely improper. 20 And as Dr. Mossman said, 21 she's never seen this before. And 22 we've already established that 23 this is just an opinion piece 24 that's signed on by several  1 plaintiffs' attorneys. Answer 2 your question — 3 MR. SMITH: Look, I'm going 4 to let — I'm going to let you go. 5 There are no more speaking 6 objections, otherwise, I'm going 7 to get the Court on the phone. 8 You can speak — you can voice 9 your objection, but we're not 10 going to have speaking objections. 11 MR. FROST: Well, we'll see. 12 I mean, I've — as I've said, I 13 just — I'm objecting to the 13 Just sitting there and 14 proprietary of even using, you 15 know, this example. 16 Just sitting there and 17 reading a — a letter into the 18 record and not asking a question 19 about it, is not the proper — 19 MR. SMITH: I'll get the 20 Court involved. If you're going 21 to continue to speak, do speaking 22 objections, I'm going to call — 23 Mr. SMITH: Only the point that International Journal of 24 Court involved. If you're going 25 There are no more speaking 26 O. Vay. 27 A. I — I also want to bring up 28 the point that International Journal of 29 Cocupational and Environmental Health, 29 I'm not sure that journal still exists. 20 If this is the one, as the letter is 21 I'm not sure that journal still exists. 22 If this is the one, as the letter is 23 signed, that Dr. Egilman was editor of 24 this journal, has been dropped by 29 Elsevier. 20 Well, let's talk about a 21 few — a few studies. Did you publish a 22 published in this journal. 23 (cleavage fragments) in in vitro (cell or 24 or organ culture) models and bioassays"? 25 A. Yes. I — that was the 26 paper that I published in this journal. 29 A. Yes. I — that was the 29 published in the Regulatory Toxicology 20 A. Yes. I — that was the 21 published in this j			11	
speaking objection.  MR. FROST: second  MR. SMITH: I don't need a  speaking objection.  MR. FROST: But I think this  mile of questioning, quite  mile of questioning, quite  mile of frankly, is completely improper.  And as Dr. Mossman said,  she's never seen this before. And  we've already established that  mile of already established that  mile of that's signed on by several  mile objections, I'm going  mile objections, I'm going  mile objections, I'm going  mile objections, I'm going  mile objection, I'm going  mile objections, I'm going to call  mile of uestioning, quite  mile of questioning, quite  mile objections, I'm going  mile objection.  mile of questioning, quite  mile of questioning, quite  mile objection.  mile of questioning, quite  mile of questioning, quite  mile objection.  mile of questioning, quite  mile objection.  mile of questioning, quite  mile of questioning, quite  mile of questioning, quite  mile of questioning, quite  mile objection and that I do  mile objection and these individuals, as I  mile objection and the speat obj		· · · · · · · · · · · · · · · · · · ·	12	
MR. FROST: second MR. SMITH: I don't need a speaking objection. MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper. And as Dr. Mossman said, she's never seen this before. And we've already established that this is just an opinion piece that's signed on by several  Page 107  Page 107  Page 107  Page 109  Page 107  Page 109  An I would also Q. I know you said I'm sorry? A. I I also want to bring up the point that International Journal of Occupational and Environmental Health,  Page 109		•		
MR. SMITH: I don't need a speaking objection.  MR. FROST: But I think this entire line of questioning, quite frankly, is completely improper.  And as Dr. Mossman said, 20 Q. Okay.  She's never seen this before. And we've already established that this is just an opinion piece that's signed on by several  Page 107  Page 107  Page 109  P				· ·
16				
17 MR. FROST: But I think this 18 entire line of questioning, quite 19 frankly, is completely improper. 20 And as Dr. Mossman said, 21 she's never seen this before. And 22 we've already established that 23 this is just an opinion piece 24 that's signed on by several 25 plaintiffs' attorneys. Answer 26 your question 27 James MR. SMITH: Look, I'm going 28 to let I'm going to let you go. 29 There are no more speaking 20 bjections; otherwise, I'm going 21 to get the Court on the phone. 22 Your objection, but we're not 23 going to have speaking objections. 24 I mean, I've as I've said, I just I'm objecting to the 25 Just sitting there and 26 Just sitting there and 27 The going to let you go. 38 Just sitting there and 39 Just sitting there and 40 Just sitting there and 41 Court involved. If you're going 42 Court involved. If you're going 43 Look and a sking a question 44 Dr. Egilman was editor of the pathogenic potential of asbestiform versus non-asbestiform particulates 45 Just sitting there and 46 Just sitting there and 47 reading a a letter into the 48 record and not asking a question 49 about it, is not the proper 40 MR. SMITH: I'll get the 40 Court involved. If you're going 41 to continue to speak, do speaking 42 objections, I'm going to call 40 Coupational and Environmental Health, 41 I'm not sure that journal still exists. 42 I'm not sure that journal still exists. 43 If this is the one, as the letter is 44 If in not sure that journal still exists. 45 If this is the one, as the letter is 46 Just sitl about a few a few studies. Did you publish a publication called "Assessment of the publication called "Assessment o				
entire line of questioning, quite frankly, is completely improper. And as Dr. Mossman said, she's never seen this before. And we've already established that this is just an opinion piece that's signed on by several  Page 107  Page 107  Page 109				=
frankly, is completely improper.  And as Dr. Mossman said,  she's never seen this before. And we've already established that this is just an opinion piece that's signed on by several  Page 107  Page 109  Pa				_
And as Dr. Mossman said, she's never seen this before. And we've already established that this is just an opinion piece that's signed on by several  Page 107  Page 109  Page 10			_	•
she's never seen this before. And we've already established that this is just an opinion piece that's signed on by several that's signed and Environmental Health,  Page 107  Page 109				
22 we've already established that this is just an opinion piece that's signed on by several  23 the point that International Journal of Occupational and Environmental Health,  24 Page 107  25 Page 107  26 Page 107  27 Page 109  28 Page 109  29 Page 107  20 Page 109  20 Page 109  21 I'm not sure that journal still exists. If this is the one, as the letter is signed, that Dr. Egilman was editor of this journal, has been dropped by the journal, has been dropped by the journal still exists. If this journal, has been dropped by the journal still exists.  20 Well, let's talk about a few - a few studies. Did you publish a publication called "Assessment of the pathogenic potential of asbestiform versus non-asbestiform particulates (cleavage fragments) in in vitro (cell or organ culture) models and bioassays."?  21 A. Yes. I that was the paper that I published in this journal.  22 A. Yes. I that was the paper that I published in this journal.  23 A. Yes. I that was the paper that I published in this journal.  24 A. A. I I'm going to letyou journal still exists.  25 A. Yes. I that was the paper that		,		•
this is just an opinion piece that's signed on by several  Page 107  Page 107  Page 109  Page 10				•
that's signed on by several  Page 107  Page 109  plaintiffs' attorneys. Answer your question  MR. SMITH: Look, I'm going to let I'm going to let you go.  There are no more speaking objections; otherwise, I'm going to going to have speaking objection, but we're not going to have speaking objections.  MR. FROST: Well, we'll see.  I mean, I've as I've said, I just I'm objecting to the proprietary of even using, you the know, this example.  Just sitting there and record and not asking a question about it, is not the proper  MR. SMITH: I'll get the Court in or by several and pobjections, I'm going to continue to speak, do speaking objections, I'm going to document of the pathogenic potential of asbestiform versus non-asbestiform pathogenic potential of asbestiform and paper that I published in this journal.  A. Yes. I that was the paper that I published in this journal.  Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form.  MR. SMITH: I'll get the continue to speak, do speaking objections, I'm going to call  Page 109  Page 109  I'm not sure that journal still exists.  If this is the one, as the letter is signed, that Dr. Egilman was editor of this journal, has been dropped by Elsevier.  O. Well, let's talk about a few a few studies. Did you publish a publication called "Assessment of the pathogenic potential of asbestiform pathogenic potential of asbestiform versus non-asbestiform pathogenic potential of asbestiform of the pathogenic potential of asbestiform pathogenic potential o				
page 107  plaintiffs' attorneys. Answer your question MR. SMITH: Look, I'm going to let I'm going to let you go. There are no more speaking to get the Court on the phone. You can speak you can voice your objection, but we're not going to have speaking objections. MR. FROST: Well, we'll see. There are Nobjecting to the lateral proprietary of even using, you know, this example.  MR. FROST: Well pere and reading a a letter into the record and not asking a question MR. SMITH: I'll get the Court involved. If you're going course was the letter is lif this is the one, as the letter is signed, that Dr. Egilman was editor of this journal, has been dropped by Elsevier.  Q. Well, let's talk about a few a few studies. Did you publish a publication called "Assessment of the pathogenic potential of asbestiform versus non-asbestiform particulates (cleavage fragments) in in vitro (cell or organ culture) models and bioassays"?  A. Yes. I that was the paper that I published in this journal. Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said that.  BY MR. SMITH:  BY MR. SMITH:  BY MR. SMITH:  BY MR. SMITH:  Q. You just told me earlier				
plaintiffs' attorneys. Answer your question  MR. SMITH: Look, I'm going to let I'm going to let you go. There are no more speaking objections; otherwise, I'm going to get the Court on the phone. You can speak you can voice your objection, but we're not going to have speaking objections.  MR. FROST: Well, we'll see. I mean, I've as I've said, I just I'm objecting to the proprietary of even using, you thoughness the proper mandal about it, is not the proper mandal about it, is not the proper and objections, I'm going to call  I mean, I've your objection to the mandal about a few a few studies. Did you publish a publication called "Assessment of the pathogenic potential of asbestiform versus non-asbestiform particulates (cleavage fragments) in in vitro (cell or organ culture) models and bioassays'"?  A. Yes. I that was the paper that I published in this journal.  Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form.  MR. SMITH: I'll get the  Under the proper device is signed, that Dr. Egilman was editor of this journal, has been dropped by  Elsevier.  Q. Well, let's talk about a few a few studies. Did you publish a publication called "Assessment of the pathogenic potential of asbestiform versus non-asbestiform particulates  (cleavage fragments) in in vitro (cell or organ culture) models and bioassays'"?  A. Yes. I that was the paper that I published in this journal.  Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form.  MR. FROST: Form.  THE WITNESS: I just said  that.  BY MR. SMITH:  Q. You just told me earlier	24	that's signed on by several	24	Occupational and Environmental Health,
your question  MR. SMITH: Look, I'm going to let I'm going to let you go. There are no more speaking objections; otherwise, I'm going to get the Court on the phone. You can speak you can voice your objection, but we're not going to have speaking objections. There as I've said, I just I'm objecting to the proprietary of even using, you tknow, this example. Just sitting there and shout it, is not the proper MR. SMITH: I'll get the Court involved. If you're going to let I'm going to let you go.  I man, I've as I've said, I gust I'm objections to the man, I've as I've said, I gust I'm objection to the man, I've as I've said, I gust I'm objecting to the man, I've as I've said, I gust I'm objecting to the man, I've as I've said, I man, I've as I've said, I gust I'm objecting to the man, I've as I've said, I man, I've as I'v		Page 107		Page 109
your question  MR. SMITH: Look, I'm going to let I'm going to let you go. There are no more speaking objections; otherwise, I'm going to get the Court on the phone. You can speak you can voice your objection, but we're not going to have speaking objections. There as I've said, I just I'm objecting to the proprietary of even using, you tknow, this example. Just sitting there and shout it, is not the proper MR. SMITH: I'll get the Court involved. If you're going to let I'm going to let you go.  I man, I've as I've said, I gust I'm objections to the man, I've as I've said, I gust I'm objection to the man, I've as I've said, I gust I'm objecting to the man, I've as I've said, I gust I'm objecting to the man, I've as I've said, I man, I've as I've said, I gust I'm objecting to the man, I've as I've said, I man, I've as I'v	1	plaintiffs' attorneys. Answer	1	I'm not sure that journal still exists.
MR. SMITH: Look, I'm going to let I'm going to let you go. There are no more speaking objections; otherwise, I'm going to get the Court on the phone. You can speak you can voice going to have speaking objections.  MR. FROST: Well, we'll see. I I mean, I've as I've said, I just I'm objecting to the proprietary of even using, you though this example. Just sitting there and Just sitting there and And MR. SMITH: I'll get the Court involved. If you're going Coupletions, I'm going to the your objections, I'm going to call  MR. SMITH: Look, I'm going to this journal, has been dropped by this journal, has been dropped by Elsevier. Q. Well, let's talk about a few a few studies. Did you publish a publication called "Assessment of the pathogenic potential of asbestiform versus non-asbestiform particulates (cleavage fragments) in in vitro (cell or organ culture) models and bioassays"?  A. Yes. I that was the paper that I published in this journal. Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said that.  BY MR. SMITH:  BY MR. SMITH:  Q. You just told me earlier	2		2	If this is the one, as the letter is
to let I'm going to let you go. There are no more speaking objections; otherwise, I'm going to get the Court on the phone. To get the Court on the phone. To going to have speaking objections. There are no more speaking objection, but we're not going to have speaking objections. The mean, I've as I've said, I just I'm objecting to the the proprietary of even using, you the proprietary of even using, you There are no more speaking to get the Court on the phone. The proprietary of even using, you the pathogenic potential of asbestiform particulates (cleavage fragments) in in vitro (cell or organ culture) models and bioassays"?  A. Yes. I that was the paper that I published in this journal.  Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said to continue to speak, do speaking objections, I'm going to call  The word and mot against and the paper that I was The WITNESS: I just said to Court involved. If you're going Q. You just told me earlier	3	* *	3	signed, that Dr. Egilman was editor of
There are no more speaking objections; otherwise, I'm going to get the Court on the phone. You can speak you can voice going to have speaking objections.  MR. FROST: Well, we'll see. I mean, I've as I've said, I just I'm objecting to the proprietary of even using, you know, this example. Just sitting there and reading a a letter into the record and not asking a question about it, is not the proper MR. SMITH: I'll get the Court involved. If you're going to get the Court on the phone.  Elsevier. Q. Well, let's talk about a few a few studies. Did you publish a publication called "Assessment of the publication called "	4		4	this journal, has been dropped by
objections; otherwise, I'm going to get the Court on the phone.  You can speak you can voice going to have speaking objections.  MR. FROST: Well, we'll see. I mean, I've as I've said, I just I'm objecting to the proprietary of even using, you tknow, this example. Just sitting there and reading a a letter into the site about it, is not the proper MR. SMITH: I'll get the Court involved. If you're going Tou can speak you can voice publication called "Assessment of the pathogenic potential of asbestiform versus non-asbestiform particulates (cleavage fragments) in in vitro (cell or organ culture) models and bioassays"?  A. Yes. I that was the paper that I published in this journal. Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said that.  BY MR. SMITH:  BY MR. SMITH: Q. You just told me earlier	5		5	
to get the Court on the phone.  You can speak you can voice  your objection, but we're not  going to have speaking objections.  MR. FROST: Well, we'll see.  I mean, I've as I've said, I  proprietary of even using, you  know, this example.  Just sitting there and  reading a a letter into the  secord and not asking a question  MR. SMITH: I'll get the  Court involved. If you're going  Can be the Court on the phone.  few a few studies. Did you publish a  publication called "Assessment of the  pathogenic potential of asbestiform  versus non-asbestiform particulates  (cleavage fragments) in in vitro (cell or  organ culture) models and bioassays"?  A. Yes. I that was the  paper that I published in this journal.  Q. And, in fact, it was  published in the Regulatory Toxicology  and Pharmacology publication that we just  went over all this?  MR. FROST: Form.  THE WITNESS: I just said  that.  Court involved. If you're going  that.  BY MR. SMITH:  Q. You just told me earlier			6	Q. Well, let's talk about a
You can speak you can voice your objection, but we're not going to have speaking objections.  MR. FROST: Well, we'll see. I mean, I've as I've said, I just I'm objecting to the proprietary of even using, you know, this example.  Just sitting there and reading a a letter into the secord and not asking a question MR. SMITH: I'll get the Court involved. If you're going Court involved. If you're going Court involved. I'm going to call  Bublication called "Assessment of the paper datled "Assessm			7	
your objection, but we're not going to have speaking objections.  MR. FROST: Well, we'll see. I mean, I've as I've said, I just I'm objecting to the proprietary of even using, you through the greading a a letter into the record and not asking a question mR. SMITH: I'll get the Court involved. If you're going Court involved. If you're going Court involved. I'm going to call  your bjections, but we're not pathogenic potential of asbestiform versus non-asbestiform particulates cleavage fragments) in in vitro (cell or cleavage fragments)  A. Yes. I that was the paper that I published in this journal.  Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said that.  BY MR. SMITH: Q. You just told me earlier	8	•	8	
going to have speaking objections.  MR. FROST: Well, we'll see.  I mean, I've as I've said, I  just I'm objecting to the  proprietary of even using, you  know, this example.  Just sitting there and  reading a a letter into the  record and not asking a question  MR. SMITH: I'll get the  Court involved. If you're going  MR. SMITH:  going to have speaking objections.  10 versus non-asbestiform particulates  (cleavage fragments) in in vitro (cell or  organ culture) models and bioassays"?  A. Yes. I that was the  paper that I published in this journal.  Q. And, in fact, it was  published in the Regulatory Toxicology  and Pharmacology publication that we just  went over all this?  MR. FROST: Form.  THE WITNESS: I just said  that.  BY MR. SMITH:  BY MR. SMITH:  BY MR. SMITH:  Q. You just told me earlier			9	•
MR. FROST: Well, we'll see.  I mean, I've as I've said, I  just I'm objecting to the  proprietary of even using, you  know, this example.  Just sitting there and  reading a a letter into the  record and not asking a question  about it, is not the proper  MR. SMITH: I'll get the  Court involved. If you're going  Court involved. If you're going  cleavage fragments) in in vitro (cell or  organ culture) models and bioassays"?  A. Yes. I that was the  paper that I published in this journal.  Q. And, in fact, it was  published in the Regulatory Toxicology  and Pharmacology publication that we just  went over all this?  MR. FROST: Form.  THE WITNESS: I just said  that.  BY MR. SMITH:  BY MR. SMITH:  Q. You just told me earlier		•	10	
I mean, I've as I've said, I  just I'm objecting to the  proprietary of even using, you  know, this example.  Just sitting there and  reading a a letter into the  about it, is not the proper  MR. SMITH: I'll get the  Court involved. If you're going  Court involved. If you're going  Timean, I've as I've said, I  A. Yes. I that was the  paper that I published in this journal.  Q. And, in fact, it was  published in the Regulatory Toxicology and Pharmacology publication that we just  went over all this?  MR. FROST: Form.  THE WITNESS: I just said that.  BY MR. SMITH:  BY MR. SMITH:  Q. You just told me earlier				
just I'm objecting to the proprietary of even using, you know, this example.  Just sitting there and reading a a letter into the about it, is not the proper MR. SMITH: I'll get the Court involved. If you're going to continue to speak, do speaking objections, I'm going to call  A. Yes. I that was the paper that I published in this journal.  Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said that.  BY MR. SMITH: Q. You just told me earlier				
proprietary of even using, you the paper that I published in this journal. The Regulatory Toxicology and Pharmacology publication that we just went over all this? THE WITNESS: I just said that. THE WITNESS: I just said THE WITNESS: I ju				
know, this example.  Just sitting there and reading a a letter into the about it, is not the proper MR. SMITH: I'll get the Court involved. If you're going Continue to speak, do speaking Show, this example.  15 Q. And, in fact, it was published in the Regulatory Toxicology and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said that. BY MR. SMITH: BY MR. SMITH: Q. You just told me earlier		ž č		
Just sitting there and reading a a letter into the record and not asking a question about it, is not the proper MR. SMITH: I'll get the Court involved. If you're going to continue to speak, do speaking objections, I'm going to call Light and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said that.  BY MR. SMITH:  BY MR. SMITH:  Q. You just told me earlier				1 1 1
reading a a letter into the record and not asking a question about it, is not the proper MR. SMITH: I'll get the Court involved. If you're going to continue to speak, do speaking objections, I'm going to call  reading a a letter into the and Pharmacology publication that we just went over all this?  MR. FROST: Form. THE WITNESS: I just said that. BY MR. SMITH: Q. You just told me earlier				
record and not asking a question about it, is not the proper MR. SMITH: I'll get the Court involved. If you're going to continue to speak, do speaking objections, I'm going to call  record and not asking a question 18 went over all this?  MR. FROST: Form. THE WITNESS: I just said that.  BY MR. SMITH: Q. You just told me earlier				
about it, is not the proper  MR. SMITH: I'll get the  Court involved. If you're going to continue to speak, do speaking objections, I'm going to call  about it, is not the proper  Description:  MR. FROST: Form.  THE WITNESS: I just said that.  BY MR. SMITH:  Q. You just told me earlier		· ·		
MR. SMITH: I'll get the Court involved. If you're going to continue to speak, do speaking objections, I'm going to call  20 THE WITNESS: I just said that. BY MR. SMITH: Q. You just told me earlier				
Court involved. If you're going 21 that. 22 to continue to speak, do speaking 22 BY MR. SMITH: 23 objections, I'm going to call 23 Q. You just told me earlier				
to continue to speak, do speaking 22 BY MR. SMITH: 23 objections, I'm going to call 23 Q. You just told me earlier				<del>_</del>
23 objections, I'm going to call 23 Q. You just told me earlier				
2.2 diac jour only involvement with this				
		1 We have a Special Master		and jour only milest while this

28 (Pages 106 to 109)

	Page 110		Page 112
1	publication was looking at two	1	Q. Well, let's let's look at
2	peer-reviewed articles. You didn't state	2	it. Your conclusions of assessing
3	anything about actually publishing on the	3	whether of the pathogenic potential of
4	assessment of the pathogenic potential of	4	asbestos versus non-asbestiform cleavage
5	asbestiform versus cleavage fragments.	5	fragments. We look at the abstract, and
6	You didn't state that earlier when you	6	in the last sentence, "The available
7	when you talked about your review	7	studies show that cleavage fragments are
8	A. Sir	8	less bioreactive and cytotoxic than
9	Q your time excuse me.	9	asbestiform fibers."
10	As your time as a reviewer for this	10	Was that your conclusion?
11	publication, did you?	11	A. That is the conclusion based
12	MR. FROST: Objection to	12	upon all my peer-reviewed papers that
13	form.	13	have been published on this topic. Yes.
14	THE WITNESS: You you did	14	This is a review.
15	not ask me if I published in this	15	MR. SMITH: I'll attach that
16	journal.	16	as Exhibit 12.
17	Yes, I have an article	17	BY MR. SMITH:
18	published in this journal.	18	Q. And on your reference
19	(Document marked for	19	materials that you have for this case
20	identification as Exhibit	20	that I received, you have an article by
21	Mossman-12.)	21	Alfred Wehner. "Cosmetic Talc Should Not
22	BY MR. SMITH:	22	Be Listed As a Carcinogen: Comments on
23		23	NTP Deliberations to Talc As a
24	Q. Well, ma'am, you told me, and I can have them read it back to you,	24	Carcinogen."
2 <del>4</del>	and I can have them read it back to you,	24	Carcinogen.
	Page 111		Page 113
1	that the only involvement you had with	1	Do you recall that?
2	this publication was reviewing two	2	A. I do.
3	articles. Do we need to go back to the	3	Q. You also listed a paper by
4	testimony?	4	Mr. Zazenski, who it's entitled "Talc:
5	MR. FROST: Objection to	5	Occurrence, Characterization and Consumer
6	form.	6	Applications."
7	THE WITNESS: I'm sorry,	7	Do you see that? Do you
8	sir, but you were asking me about	8	recall that?
9	Page 3 on my CV, which lists	9	A. Yes.
10	journals that I have reviewed for.	10	Q. Okay. Did you know both of
11	And the questions that you	11	those were published in Regulatory
12	asked me I answered with regard to	12	Toxicology and Pharmacology?
13	my editorial responsibility in	13	A. I don't recall that. But
14	reviewing a paper or two for this	14	Q. Let's look at them.
15	journal.	15	MR. FROST: Which one? Are
16	BY MR. SMITH:	16	you going to mark this?
17	Q. You left out that you	17	MR. SMITH: I'm going to
18	actually published in the journal too?	18	mark Alfred Wehner's publication
19	MR. FROST: Objection to	19	as Exhibit 13. And Zazenski as
20	form.	20	14.
21	THE WITNESS: I I	21	(Document marked for
22	acknowledge that I published in	22	identification as Exhibit
23	the journal.	23	Mossman-13.)
	BY MR. SMITH:	24	(Document marked for
24			

29 (Pages 110 to 113)

1 identification as Exhibit 2 Mossman-14.) 3 BY MR. SMITH: 4 Q. And let's look at both of 5 these. So, we have — we went over 6 Regulatory Toxicology and Pharmacology, 7 what David Michaels wrote about them, 8 what was in the International Journal of 9 Occupational and Environmental Health 10 over your publication in that journal, 11 over your publication in that journal, 12 which we just talked about and discussed 13 your opinion in the abstract that when 14 looking at asbestos versus the cleavage 15 fragments, you concluded the available 16 studies showed that cleavage fragments 17 are less bioreactive and cytotoxic than 18 asbestiform fibers. 19 Now we'll move to 20 Dr. Wehner's assessment in the same 21 journal. And if you look down at his 22 conclusion in the abstract, "Considering 23 talc as a carcinogen lacks convincing 24 scientific documentation."  Page 115  1 Do you see that? 2 MR. FROST: Objection to 5 form, the beginning of that 4 Q. Da you see that. 5 BY MR. SMITH: 6 Q. Do you see that? 7 A. I see it in the abstract, 8 yes. 9 Q. And then if we go — that's 10 in Exhibit 13. 11 And if we go to Exhibit 14, 12 "Talc Occurrence, Characterization, and 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 map Paramacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide 18 variety of cosmetic and other 19 applications, ki has proven to be the 20 safest among all consumer products. 18 a city of cosmetic and other 29 applications, ki has proven to be the 20 safest among all consumer products. 19 "A thorough review of the 20 literature provides no convincing 21 "A thorough review of the 22 literature provides no convincing 23 evidence that cosmetic tale when used as 24 intended presents any health risk to		Page 114		Page 116
Wehner.   So, we have we went over these. So, we have we went over these. So, we have we went over the Regulatory Toxicology and Pharmacology, what David Michaels wrote about them, what was in the International Journal of Occupational and Environmental Health that you had not seen before. We went to your population in that journal, which we just talked about and discussed your opinion in the abstract that when losting at absetos versus the cleavage fragments your opinion in the abstract that when losts showed that cleavage fragments assestiform fibers.   A. Okay, Yeah.	1	identification as Exhibit	1	consumers." And then he quotes Alfred
4 Q. And let's look at both of 5 these. So, we have we went over 6 Regulatory Toxicology and Pharmacology, 7 what David Michaels wrote about them, 8 what was in the International Journal of 9 Occupational and Environmental Health 10 that you had not seen before. We went 11 over your publication in that journal, 12 which we just talked about and discussed 13 your opinion in the abstract that when 14 looking at asbestos versus the cleavage 15 fragments, you concluded the available 16 studies showed that cleavage fragments 17 are less bioreactive and cytotoxic than 18 asbestiform fibers. 19 Now we'll move to 10 Dr. Wehner's assessment in the same 20 Dr. Wehner's assessment in the same 21 journal. And if you look down at his 22 conclusion in the abstract, "Considering 23 tale as a carcinogen lacks convincing 24 scientific documentation."  Page 115  Do you see that?  1 Do you see that?  2 MR. FROST: Objection to 3 form, the beginning of that 4 question.  3 form, the beginning of that 4 question.  BY MR. SMITH:  1 Do you want to go 10 no to a different section, 11 use the restroom.  11 THE VIDEOGRAPHER: We are 22 going back on record. Beginning 23 Media File Number 2. The time is 10:47.  BY MR. SMITH:  1 Do you see that?  1 THE VIDEOGRAPHER: We are 2 going back on record. Beginning 3 Media File Number 2. The time is 10:47.  BY MR. SMITH:  Q. Okay. Doctor, what are the 10 many provides in the abstract, 2 of the record. Time is 10:36.  Charlet a decay are the abstract, 3 form, the beginning of that 4 question.  4 question.  BY MR. SMITH:  1 Do you see that?  1 THE VIDEOGRAPHER: Off the 1 THE VIDEOGRAPHER: We are 2 going back on record. Beginning 3 Media File Number 2. The time is 10:47.  BY MR. SMITH: 1 Do you see that?  1 THE VIDEOGRAPHER: We are 2 going back on record. Beginning 3 Media File Number 2.  4 A. Tsee it in the abstract, 5 Good on the abstract, 6 Q. Do you know which type is 6 diagnose	2	Mossman-14.)	2	<u> </u>
these. So, we have we went over Regulatory Toxicology and Pharmacology, what David Michaels wrote about them, what was in the International Journal of Occupational and Environmental Health that you had not seen before. We went over your publication in that journal, which we just talked about and discussed your opinion in the abstract that when loking at asbestos versus the cleavage for studies showed that cleavage fragments are less bioreactive and cytotoxic than asbestiform fibers.  Now we'll move to Dr. Wehner's assessment in the same journal. And if you look down at his conclusion in the abstract, "Considering as centific documentation."  Page 115  Do you see that?  MR. FROST: Objection to form, the beginning of that question.  BY MR. SMITH:  Do you see that?  THE WITNESS: Yeah, you're going a little fast here. Could you just point me to where you're reading from?  BY MR. SMITH: Q. Sure. It's under it's Page 11 of 12 under the conclusions.  A. Okay. Yeah. Q. Do you see that? A. Yes.  MR. SMITH: Do you want to take a break, or do you want to go on to a different section?  MR. FROST: If you're going to move on to another section, I'll use the restroom.  THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10-47.  BY MR. SMITH:  Do you see that,  THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10-47.  BY MR. SMITH:  Q. Do, Vou see that, Doctor? A. I see it in the abstract, yes. Q. And then if we go that's in Exhibit 13.  And if we go to Exhibit 14, Tale Occurrence, Characterization, and Consumer Applications, and we go to what Mr. Zazenski wrote in this publication, and Pharmacology, his conclusion on Page 11 of 12. "Used for decades in a wide variety of cosmetic and other applications, talc has proven to be the applications, to	3		3	Do you see that?
6 Regulatory Toxicology and Pharmacology, what David Michaels wrote about them, 8 what was in the International Journal of 9 Occupational and Environmental Health 10 that you had not seen before. We went 11 over your publication in that journal, 12 which we just talked about and discussed 13 your opinion in the abstract that when 14 looking at asbestos versus the cleavage fragments, you concluded the available 15 fragments, you concluded the available 16 studies showed that cleavage fragments asbestiform fibers. 18 now we'll move to 19 your we'll move to 19 your opinion in the abstract was and cytotoxic than asbestiform fibers. 18 now we'll move to 19 your onto a different section? 19 MR. FROST: If you're going to move on to another section, 19 when the same 20 your opinion in the abstract, 19 your we'll move to 19 you want to go on to a different section? 19 your want to go on to a	4	Q. And let's look at both of	4	MR. FROST: Objection to
what David Michaels wrote about them, what was in the International Journal of Occupational and Environmental Health that you had not seen before. We went over your publication in that journal, which we just talked about and discussed your opinion in the abstract that when looking at absets oversus the cleavage fragments, you concluded the available studies showed that cleavage fragments are less bioreactive and cytotoxic than asbestiform fibers.  Now we'll move to Dr. Wehner's assessment in the same conclusion in the abstract, "Considering at leas a carcinogen lacks convincing scientific documentation."  Page 115  Do you see that?  MR. FROST: Objection to form, the beginning of that question.  BY MR. SMITH: Do you want to go on to a different section?  MR. FROST: If you're going to move on to another section, I'll use the restroom. I'll	5	these. So, we have we went over	5	form.
what was in the International Journal of Occupational and Environmental Health that you had not seen before. We went which we just talked about and discussed your opinion in the abstract that when you gour opinion in the abstract that when you opinion in the abstract that when the looking at ashestos versus the cleavage fragments, you concluded the available studies showed that cleavage fragments rate less bioreactive and cytotoxic than ashestiform fibers.  Now we'll move to Dr. Wehner's assessment in the same journal. And if you look down at his conclusion in the abstract, "Considering at leas a carcinogen lacks convincing scientific documentation."  Page 115  Do you see that?  Do you see that?  Do you see that?  MR. FROST: Objection to form, the beginning of that question.  MR. FROST: Objection to Shark MR. SMITH: Q. Da you see that?  THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10:47.  BY MR. SMITH: Q. Day on which type is different histological types of ovarian cancer?  A. I see it in the abstract, yes. Q. And then if we go that's in Exhibit 13. And if we go to Exhibit 14, Tale Occurrence, Characterization, and Consumer Applications," and we go to what Mr. Zazenski wrote in this publication, Safest among all consumer products.  A. Okay. Yeah. A. Yes. MR. SMITH: Do you want to take a break, or do you want to go on to a different section? MR. FROST: If you're going to move on to another section? MR. FROST: Objection to 12 13 14 15 15 16 17 11 16 17 18 19 19 10 19 10 10 10 10 11 11 11 12 11 12 13 14 15 15 16 17 11 16 17 11 17 11 18 18 18 19 19 19 19 10 19 10 10 10 11 11 11 11 11 12 11 12 11 12 13 14 14 15 15 16 17 11 16 17 11 17 11 17 11 18 18 18 19 18 19 18 19 19 19 10 10 11 11 11 11 11 11 11 11 11 11 11	6	Regulatory Toxicology and Pharmacology,	6	THE WITNESS: Yeah, you're
9 Occupational and Environmental Health 10 that you had not seen before. We went 11 over your publication in that journal, 12 which we just talked about and discussed 13 your opinion in the abstract that when 14 looking at absetsots versus the cleavage 15 fragments, you concluded the available 16 studies showed that cleavage fragments 17 are less bioreactive and cytotoxic than 18 asbestiform fibers. 19 Now we'll move to 19 Newher's assessment in the same 20 Dr. Wehner's assessment in the same 21 journal. And if you look down at his 22 conclusion in the abstract, "Considering 23 tale as a carcinogen lacks convincing 24 scientific documentation."  Page 115  Page 115  Page 115  Page 116 12 under the conclusions. A. Okay, Yeah. Q. Do you see that? A. Yes.  MR. SMITH: Do you want to go on to a different section? MR. FROST: If you're going to move on to another section, I'll use the restroom. THE VIDEOGRAPHER: Off the record. Time is 10:36. (Short break.)  Page 117  THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10:47. BY MR. SMITH: Q. Do you see that, Doctor? A. I see it in the abstract, yes.  9 Q. And then if we go that's yes. 9 Q. And then if we go that's 10 And if we go to Exhibit 14, 11 And if we go to Exhibit 14, 12 "Tale Occurrence, Characterization, and 13 Consumer Applications," and we go to what Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide variety of cosmetic and other 19 applications, tale has proven to be the 20 safest among all consumer products.  "A thorough review of the 21 literature provides no convincing 22 evidence that cosmetic tale when used as  "A thory the dead as a carcinopal to move on to another and the most common, high grade, endometrioid, clear cell, and mucinous.  Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  THE WIDEOGRAPHER:  A. Yes.  The time is	7	what David Michaels wrote about them,	7	going a little fast here. Could
that you had not seen before. We went over your publication in that journal, which we just talked about and discussed your opinion in the abstract that when loking at asbestos versus the cleavage fragments, you concluded the available studies showed that cleavage fragments are less bioreactive and cytotoxic than are less bioreactive and cytotoxic than asbestiform fibers.  19 Now we'll move to 19 MR. FROST: If you're going to move on to another section, I'll use the restroom.  10 Dr. Wehner's assessment in the same 21 journal. And if you look down at his 22 conclusion in the abstract, "Considering 23 scientific documentation."  10 Do you see that?  11 Do you see that?  11 Do you see that?  12 MR. FROST: Objection to 22 MR. FROST: Objection to 33 form, the beginning of that 44 question.  15 BY MR. SMITH: 55 BY MR. SMITH: 57 BY MR	8	what was in the International Journal of	8	you just point me to where you're
ver your publication in that journal, which we just talked about and discussed 13 your opinion in the abstract that when 13 your opinion in the abstract that when 14 looking at asbestos versus the cleavage 14 looking at asbestos versus the cleavage 15 fragments, you concluded the available 15 lookides showed that cleavage fragments 16 looking at asbestiform fibers. 18 asbestiform fibers. 18 look we'll move to 19 look down at his 20 look down at his 21 looking at action on the abstract, "Considering 22 conclusion in the abstract, "Considering 23 tale as a carcinogen lacks convincing 23 tale as a carcinogen lacks convincing 24 scientific documentation." 19 look you see that? 10 look down at his 21 look as a carcinogen lacks convincing 23 form, the beginning of that 4 question. 4 look as yes. 10 look and then if we go that's 10 look and then if we go that's 10 look and then if we go to Exhibit 14, 12 "Tale Occurrence, Characterization, and 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, also published in Regulatory Toxicology and Pharmacology, his conclusion on Page 11 lof 12. "Used for decades in a wide variety of cosmetic and other 19 applications, tale has proven to be the 20 safest among all consumer products. 21 "A thorough review of the 21 literature provides no convincing 22 evidence that cosmetic tale when used as 23 mR. FROST: Objection to form. 22 mR. FROST: Objection to form. 23 mR. FROST: Objection to form. 24 literature provides no convincing 22 mR. FROST: Objection to form. 24 literature provides no convincing 22 mR. FROST: Objection to form. 25 mR. FROST: O	9	Occupational and Environmental Health	9	reading from?
which we just talked about and discussed your opinion in the abstract that when looking at asbestos versus the cleavage 14 looking at asbestos versus the cleavage 15 fragments, you concluded the available 15 fragments, you concluded the available 16 studies showed that cleavage fragments 16 studies showed that cleavage fragments 17 are less bioreactive and cytotoxic than 18 asbestiform fibers. 18 asbestiform fibers. 18 sone on to a different section? 19 Now we'll move to 19 MR. FROST: If you're going 19 to move on to another section, 19 to move	10	that you had not seen before. We went	10	BY MR. SMITH:
3	11	over your publication in that journal,	11	Q. Sure. It's under it's
looking at asbestos versus the cleavage fragments, you concluded the available studies showed that cleavage fragments 16 studies showed that cleavage fragments 17 take a break, or do you want to go on to a different section?  Dr. Wehner's assessment in the same 20 to move on to another section, 17 ll use the restroom.  Page 115 Page 115 The VIDEOGRAPHER: Off the record. Time is 10:36. (Short break.)  Page 117  Do you see that?  MR. FROST: If you're going to move on to another section, 17 ll use the restroom.  THE VIDEOGRAPHER: Off the record. Time is 10:36. (Short break.)  Page 117  The VIDEOGRAPHER: We are 20 going back on record. Beginning Media File Number 2. The time is 10:47.  BY MR. SMITH: 5 BY MR. SMITH: 6 Q. Do you see that, Doctor? 6 Q. Day. Doctor, what are the different histological types of ovarian cancer?  A. I see it in the abstract, 29 Q. And then if we go that's 29 Q. And then if we go that's 20 also published in Regulatory Toxicology 21 also published in Regulatory Toxicology 21 and Pharmacology, his conclusion on Page 22 applications, talc has proven to be the 23 are after among all consumer products. 20 MR. FROST: Objection to form. 21 literature provides no convincing 22 THE WITNESS: They don't 22 know. They are all derivatives of	12	which we just talked about and discussed	12	Page 11 of 12 under the conclusions.
15 fragments, you concluded the available studies showed that cleavage fragments 16 studies showed that cleavage fragments 17 are less bioreactive and cytotoxic than 17 take a break, or do you want to go on to a different section?  18 asbestiform fibers. 18 on to a different section?  19 Now we'll move to 19 MR. FROST: If you're going to move on to another section, 19 in move on the above and 19 in mo	13	your opinion in the abstract that when	13	A. Okay. Yeah.
studies showed that cleavage fragments are less bioreactive and cytotoxic than asbestiform fibers.  Now we'll move to 19 MR. FROST: If you're going to move on to another section, I'll use the restroom.  The VIDEOGRAPHER: Off the record. Time is 10:36.  Spage 115  Page 115  Page 115  Page 117  Do you see that?  MR. SMITH: Do you want to take a break, or do you want to go on to a different section, I'll use the restroom.  I'll use the restroom.  Page 115  Page 115  Page 115  Page 117  THE VIDEOGRAPHER: Off the record. Time is 10:36. (Short break.)  Page 117  THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10:47.  By MR. SMITH: 5 BY MR. SMITH:  Q. Do you see that, Doctor? 6 Q. Okay. Doctor, what are the different histological types of ovarian cancer?  Q. And then if we go that's 9 Q. Okay. Doctor, what are the different histological types of ovarian cancer?  A. There are four types. There is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous.  Q. Do you know which type is diagnosed most in the United States?  A. Yes. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  MR. SMITH: Do you want to take a break, or do you want to go on to a different section, I'll use the restroom.  MR. FROST: If you're going to move on to another section, I'll use the restroom.  I'll use	14	looking at asbestos versus the cleavage	14	Q. Do you see that?
are less bioreactive and cytotoxic than absestiform fibers.  Now we'll move to Dr. Wehner's assessment in the same pour conclusion in the abstract, "Considering activation."  Page 115  Do you see that?  MR. FROST: Objection to form, the beginning of that question.  MR. SMITH: Q. Do you see that, Doctor? A. I see it in the abstract, yes. Q. And then if we go that's in Exhibit 13. And if we go to Exhibit 14, Mr. Zazenski wrote in this publication, also published in Regulatory Toxicology affect and Pharmacology, his conclusion on Page 17 I of 12. "Used for decades in a wide variety of cosmetic and other applications, talc has proven to be the applications, talc has proven to be		fragments, you concluded the available	15	A. Yes.
asbestiform fibers.  Now we'll move to Dr. Wehner's assessment in the same journal. And if you look down at his conclusion in the abstract, "Considering at lac as a carcinogen lacks convincing at lac as a carcinogen lacks convincing as cientific documentation."  Page 115  Page 115  Page 117  Do you see that?  MR. FROST: If you're going to move on to another section, I'll use the restroom. THE VIDEOGRAPHER: Off the record. Time is 10:36. (Short break.)  Page 117  THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10:47.  BY MR. SMITH: Q. Do you see that, Doctor? A. I see it in the abstract, yes. Q. And then if we go that's in Exhibit 13.  And if we go to Exhibit 14,  The VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10:47.  BY MR. SMITH: Q. O kay. Doctor, what are the different histological types of ovarian cancer?  A. There are four types. There is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous.  A. Yes. The first category of the serous.  The WITNESS: They don't know. They are all derivatives of				
Dr. Wehner's assessment in the same 21 journal. And if you look down at his 22 conclusion in the abstract, "Considering 23 talc as a carcinogen lacks convincing 24 scientific documentation." 24 THE VIDEOGRAPHER: Off the record. Time is 10:36. (Short break.)  Page 115  Page 115  Page 115  Page 117  THE VIDEOGRAPHER: Off the record. Time is 10:36. (Short break.)  Page 117  THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10:47. BY MR. SMITH: 5 BY MR.	17		17	, ,
Dr. Wehner's assessment in the same journal. And if you look down at his 22 conclusion in the abstract, "Considering 23 tale as a careinogen lacks convincing 24 scientific documentation."  Page 115  Page 115  Page 116  Page 117  Do you see that?  MR. FROST: Objection to 2 going back on record. Beginning 3 form, the beginning of that 4 question.  BY MR. SMITH: 5 BY MR. SMITH: 5 BY MR. SMITH: 6 Q. Do you see that, Doctor? 6 Q. And then if we go that's 9 yes. 8 cancer?  Q. And then if we go that's 10 in Exhibit 13. 11 And if we go to Exhibit 14, 12 "Tale Occurrence, Characterization, and 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10:47. BY MR. SMITH: 6 Q. Okay. Doctor, what are the different histological types of ovarian cancer? 9 A. There are four types. There is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous. Q. Do you know which type is diagnosed most in the United States? A. Yes. The first category of the serous. 16 Q. Where do most experts believe the histological type originates in the human body? 17 MR. FROST: Objection to form. 17 MR. FROST: Objection to form. 18 Literature provides no convincing 22 in the WITNESS: They don't know. They are all derivatives of	18		18	
journal. And if you look down at his conclusion in the abstract, "Considering tale as a carcinogen lacks convincing scientific documentation."  Page 115  Page 115  Page 117  Do you see that?  MR. FROST: Objection to going back on record. Beginning Media File Number 2. The time is 10:47.  BY MR. SMITH: Summer 2. The time is 10:47			1	
22 conclusion in the abstract, "Considering 23 talc as a carcinogen lacks convincing 24 scientific documentation."  Page 115  Page 115  Page 117  Do you see that?  MR. FROST: Objection to 2 going back on record. Beginning 3 form, the beginning of that 4 question.  BY MR. SMITH: 5 BY MR. SMITH: 6 Q. Do you see that, Doctor? 7 A. I see it in the abstract, 8 yes. 9 Q. And then if we go that's 10 in Exhibit 13. 11 And if we go to Exhibit 14, 12 "Talc Occurrence, Characterization, and 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide 18 variety of cosmetic and other 19 applications, talc has proven to be the 20 safest among all consumer products. 21 "A thorough review of the 22 literature provides no convincing 22 evidence that cosmetic talc when used as  Page 117  THE VIDEOGRAPHER: Off the record. Time is 10:36. (Short break.)  Page 117  THE VIDEOGRAPHER: We are going back on record. Beginning Media File Number 2. The time is 10:47.  BY MR. SMITH: 5 BY MR. SMITH: 6 Q. Okay. Dootor, what are the different histological types of ovarian cancer? 9 A. There are four types. There is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous. Q. Do you know which type is diagnosed most in the United States? A. Yes. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  THE WITNESS: They don't know. They are all derivatives of				
talc as a carcinogen lacks convincing scientific documentation."  Page 115  Page 115  Do you see that?  MR. FROST: Objection to 2 going back on record. Beginning Media File Number 2. The time is 10:34.  BY MR. SMITH: 5 BY MR. SMITH: 6 Q. Do you see that, Doctor? 6 Q. Okay. Doctor, what are the different histological types of ovarian cancer?  Q. And then if we go that's 10 in Exhibit 13. 10 And if we go to Exhibit 14, 11 most common, high grade, endometrioid, 12 clear cell, and mucinous. 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide variety of cosmetic and other applications, talc has proven to be the safest among all consumer products. 12 clear cell, and mucinous 13 most common, the provides no convincing 14 most common to the human body? 15 MR. FROST: Objection to 16 form. 16 THE WITNESS: They don't 23 evidence that cosmetic talc when used as 123 know. They are all derivatives of				
Page 115  Page 115  Do you see that?  MR. FROST: Objection to  Grow, the beginning of that  question.  BY MR. SMITH:  Q. Do you see that, Doctor?  A. I see it in the abstract,  yes.  Q. And then if we go that's  in Exhibit 13.  Consumer Applications," and we go to what  MR. Zazenski wrote in this publication,  also published in Regulatory Toxicology  and Pharmacology, his conclusion on Page  17 10 12. "Used for decades in a wide  variety of cosmetic and other  page 115  Page 117  THE VIDEOGRAPHER: We are going back on record. Beginning  Media File Number 2. The time is  10:47.  BY MR. SMITH:  Q. Okay. Doctor, what are the different histological types of ovarian cancer?  A. There are four types. There is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous.  Q. Do you know which type is diagnosed most in the United States?  A. Yes. The first category of the serous.  Q. Where do most experts  believe the histological type originates in the human body?  MR. FROST: Objection to form.  THE WITNESS: They don't know. They are all derivatives of				
Page 115  Do you see that?  MR. FROST: Objection to  MR. SMITH:  MR. SMITH:  MR. SMITH:  MR. SMITH:  MR. SMITH:  MR. Swith are the  MR. Frost ovarian  Clear cell, and mucinous.  Q. Do you know which type is  MR. Swith are the  MR. Swith are the  MR. Swith are the  MR. Frost are four types. There  is invasive, the serous, which is the  most common, high grade, endometrioid,  clear cell, and mucinous.  Q. Do you know which type is  diagnosed most in the United States?  A. Yes. The first category of  the serous.  Q. Where do most experts  believe the histological type originates  in the human body?  MR. FROST: Objection to  form.  THE WITNESS: They don't  know. They are all derivatives of				
1 Do you see that? 2 MR. FROST: Objection to 3 form, the beginning of that 4 question. 4 10:47. 5 BY MR. SMITH: 6 Q. Do you see that, Doctor? 7 A. I see it in the abstract, 9 Q. And then if we go that's 10 in Exhibit 13. 11 And if we go to Exhibit 14, 12 "Talc Occurrence, Characterization, and 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide 18 variety of cosmetic and other 19 applications, talc has proven to be the 20 safest among all consumer products. 21 "A thorough review of the 22 clear cell, and mucinous. 23 P. Do you know which type is diagnosed most in the United States? 24 A. Yes. The first category of the serous. 25 MR. FROST: Objection to form. 26 MR. FROST: Objection to form. 27 THE WITNESS: They don't know. They are all derivatives of	24	scientific documentation."	24	(Short break.)
mr. FROST: Objection to form, the beginning of that question.  mr. FROST: Objection to going back on record. Beginning media File Number 2. The time is 10:47.  mr. SMITH: mr. SMITH: mr. A. I see it in the abstract, greys. mr. Q. And then if we go that's mr. Exhibit 13. mr. And if we go to Exhibit 14, mr. Zazenski wrote in this publication, mr. Also published in Regulatory Toxicology mr. To published in Regulatory Toxicology mr. To published in Regulatory Toxicology mr. Toy published in Regulatory Toxicology mr. Frost: Objection to mr. Toy published in Regulatory mr. Toy published in the United States?  mr. Yes. The first category of the serous.  mr. Published in the United States?  mr. Yes. The first category of the serous.  mr. Published in the United States?  mr. Yes. The first category of the serous.  mr. FROST: Objection to form.  mr. THE WITNESS: They don't know. They are all derivatives of		Page 115		Page 117
mr. FROST: Objection to form, the beginning of that question.  mr. FROST: Objection to going back on record. Beginning media File Number 2. The time is 10:47.  mr. SMITH: mr. SMITH: mr. A. I see it in the abstract, greys. mr. Q. And then if we go that's mr. Exhibit 13. mr. And if we go to Exhibit 14, mr. Zazenski wrote in this publication, mr. Also published in Regulatory Toxicology mr. To published in Regulatory Toxicology mr. To published in Regulatory Toxicology mr. Toy published in Regulatory Toxicology mr. Frost: Objection to mr. Toy published in Regulatory mr. Toy published in the United States?  mr. Yes. The first category of the serous.  mr. Published in the United States?  mr. Yes. The first category of the serous.  mr. Published in the United States?  mr. Yes. The first category of the serous.  mr. FROST: Objection to form.  mr. THE WITNESS: They don't know. They are all derivatives of	1	Do you see that?	1	THE VIDEOGRAPHER: We are
form, the beginning of that question.  Hedia File Number 2. The time is question.  A. A. There are four types. There is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous. Q. Do you know which type is diagnosed most in the United States? A. Yes. The first category of the serous. Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  Hedia File Number 2. The time first cate the different histological type originates in the human body?  The WITNESS: They don't know. They are all derivatives of	2	•	2	
4 question. 5 BY MR. SMITH: 6 Q. Do you see that, Doctor? 7 A. I see it in the abstract, 8 yes. 9 Q. And then if we go that's 10 in Exhibit 13. 11 And if we go to Exhibit 14, 12 "Talc Occurrence, Characterization, and 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide 18 variety of cosmetic and other 19 applications, talc has proven to be the 19 also published in Regulatory Toxicology 20 safest among all consumer products. 21 "A thorough review of the 22 literature provides no convincing 23 evidence that cosmetic talc when used as 24 10:47. 5 BY MR. SMITH: 6 Q. Okay. Doctor, what are the different histological types of ovarian cancer?  A. There are four types. There is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous. 12 clear cell, and mucinous. 13 Q. Do you know which type is diagnosed most in the United States? 14 A. Yes. The first category of the serous. 15 A. Yes. The first category of the serous. 16 Q. Where do most experts believe the histological type originates in the human body? 18 WR. FROST: Objection to form. 19 THE WITNESS: They don't know. They are all derivatives of	3		3	
6Q. Do you see that, Doctor?6Q. Okay. Doctor, what are the7A. I see it in the abstract,7different histological types of ovarian8yes.8cancer?9Q. And then if we go that's9A. There are four types. There10in Exhibit 13.10is invasive, the serous, which is the11And if we go to Exhibit 14,11most common, high grade, endometrioid,12"Talc Occurrence, Characterization, and12clear cell, and mucinous.13Consumer Applications," and we go to what13Q. Do you know which type is14Mr. Zazenski wrote in this publication,14diagnosed most in the United States?15also published in Regulatory Toxicology15A. Yes. The first category of16and Pharmacology, his conclusion on Page16the serous.1711 of 12. "Used for decades in a wide17Q. Where do most experts18variety of cosmetic and other18believe the histological type originates19applications, talc has proven to be the19in the human body?20safest among all consumer products.20MR. FROST: Objection to21"A thorough review of the21THE WITNESS: They don't22literature provides no convincing22THE WITNESS: They don't23evidence that cosmetic talc when used as23know. They are all derivatives of	4		4	10:47.
A. I see it in the abstract,  yes.  Q. And then if we go that's  in Exhibit 13.  10 is invasive, the serous, which is the  most common, high grade, endometrioid,  rate of consumer Applications, and  Consumer Applications, and we go to what  Mr. Zazenski wrote in this publication,  also published in Regulatory Toxicology  and Pharmacology, his conclusion on Page  11 of 12. "Used for decades in a wide  variety of cosmetic and other  applications, talc has proven to be the  safest among all consumer products.  "A thorough review of the  literature provides no convincing  23 evidence that cosmetic talc when used as  different histological types of ovarian  cancer?  A. There are four types. There  is invasive, the serous, which is the  most common, high grade, endometrioid,  clear cell, and mucinous.  Q. Do you know which type is  diagnosed most in the United States?  A. Yes. The first category of  the serous.  Q. Where do most experts  believe the histological type originates  in the human body?  MR. FROST: Objection to  form.  THE WITNESS: They don't  know. They are all derivatives of	5	BY MR. SMITH:	5	BY MR. SMITH:
8 yes. 9 Q. And then if we go that's 10 in Exhibit 13. 11 And if we go to Exhibit 14, 12 "Talc Occurrence, Characterization, and 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide 18 variety of cosmetic and other 19 applications, talc has proven to be the 20 safest among all consumer products. 21 "A thorough review of the 22 literature provides no convincing 23 evidence that cosmetic talc when used as 20 Cancer? 21 A. There are four types. There 22 is invasive, the serous, which is the 23 most common, high grade, endometrioid, 24 diagnosed most in the United States? 25 A. Yes. The first category of 26 the serous. 27 Q. Where do most experts 28 believe the histological type originates 29 in the human body? 20 MR. FROST: Objection to 21 THE WITNESS: They don't 22 know. They are all derivatives of	6	Q. Do you see that, Doctor?	6	Q. Okay. Doctor, what are the
Q. And then if we go that's  in Exhibit 13.  And if we go to Exhibit 14,  "Talc Occurrence, Characterization, and Consumer Applications," and we go to what Mr. Zazenski wrote in this publication, also published in Regulatory Toxicology and Pharmacology, his conclusion on Page To in Exhibit 13.  And if we go to Exhibit 14,  "Talc Occurrence, Characterization, and Consumer Applications," and we go to what Mr. Zazenski wrote in this publication, And if we go to Exhibit 14,  It most common, high grade, endometrioid, clear cell, and mucinous.  Q. Do you know which type is diagnosed most in the United States? A. Yes. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  It will be is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous.  Q. Do you know which type is diagnosed most in the United States?  A. Yes. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  It will be in Exhibit 14,  It most common, high grade, endometrioid, clear cell, and mucinous.  Q. Do you know which type is diagnosed most in the United States?  A. Yes. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  The WITNESS: They don't know. They are all derivatives of	7	A. I see it in the abstract,	7	different histological types of ovarian
in Exhibit 13.  And if we go to Exhibit 14,  "Talc Occurrence, Characterization, and Consumer Applications," and we go to what Mr. Zazenski wrote in this publication, also published in Regulatory Toxicology and Pharmacology, his conclusion on Page 11 of 12. "Used for decades in a wide variety of cosmetic and other applications, talc has proven to be the applications, talc has proven to be the "A thorough review of the literature provides no convincing 23 evidence that cosmetic talc when used as  10 is invasive, the serous, which is the most common, high grade, endometrioid, clear cell, and mucinous.  Q. Do you know which type is diagnosed most in the United States?  A. Yes. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  THE WITNESS: They don't know. They are all derivatives of	8	yes.	8	cancer?
11 And if we go to Exhibit 14, 12 "Talc Occurrence, Characterization, and 13 Consumer Applications," and we go to what 14 Mr. Zazenski wrote in this publication, 15 also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide 18 variety of cosmetic and other 19 applications, talc has proven to be the 19 applications, talc has proven to be the 20 safest among all consumer products. 21 "A thorough review of the 22 literature provides no convincing 23 evidence that cosmetic talc when used as 21 most common, high grade, endometrioid, 22 clear cell, and mucinous. 24 diagnosed most in the United States? 26 A. Yes. The first category of the serous. 27 Q. Where do most experts 28 believe the histological type originates in the human body? 29 MR. FROST: Objection to form. 21 THE WITNESS: They don't know. They are all derivatives of	9		9	A. There are four types. There
Talc Occurrence, Characterization, and Consumer Applications," and we go to what Mr. Zazenski wrote in this publication, also published in Regulatory Toxicology and Pharmacology, his conclusion on Page 11 of 12. "Used for decades in a wide variety of cosmetic and other applications, talc has proven to be the safest among all consumer products. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  The WITNESS: They don't know. They are all derivatives of	10		I	is invasive, the serous, which is the
Consumer Applications," and we go to what  Mr. Zazenski wrote in this publication, also published in Regulatory Toxicology and Pharmacology, his conclusion on Page  11 of 12. "Used for decades in a wide variety of cosmetic and other applications, talc has proven to be the safest among all consumer products.  "A thorough review of the literature provides no convincing  23 evidence that cosmetic talc when used as  20 Do you know which type is diagnosed most in the United States?  A. Yes. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  THE WITNESS: They don't know. They are all derivatives of			I	most common, high grade, endometrioid,
Mr. Zazenski wrote in this publication, also published in Regulatory Toxicology and Pharmacology, his conclusion on Page 11 of 12. "Used for decades in a wide variety of cosmetic and other applications, talc has proven to be the safest among all consumer products.  "A thorough review of the literature provides no convincing 21 evidence that cosmetic talc when used as  "A thorough review of the literature provides no convincing 22 converse diagnosed most in the United States? A. Yes. The first category of the serous.  Q. Where do most experts believe the histological type originates in the human body?  MR. FROST: Objection to form.  THE WITNESS: They don't know. They are all derivatives of			I	
also published in Regulatory Toxicology 16 and Pharmacology, his conclusion on Page 17 11 of 12. "Used for decades in a wide 18 variety of cosmetic and other 19 applications, talc has proven to be the 20 safest among all consumer products. 21 "A thorough review of the 22 literature provides no convincing 23 evidence that cosmetic talc when used as 25 A. Yes. The first category of 26 the serous. 27 Q. Where do most experts 28 believe the histological type originates 29 in the human body? 20 MR. FROST: Objection to 21 form. 22 THE WITNESS: They don't 23 know. They are all derivatives of			1	
and Pharmacology, his conclusion on Page 11 of 12. "Used for decades in a wide 12 variety of cosmetic and other 13 applications, talc has proven to be the 14 applications, talc has proven to be the 15 safest among all consumer products. 16 the serous. 17 Q. Where do most experts 18 believe the histological type originates 19 in the human body? 20 MR. FROST: Objection to 21 "A thorough review of the 21 form. 22 Iterature provides no convincing 23 THE WITNESS: They don't 24 know. They are all derivatives of		*	1	
17 11 of 12. "Used for decades in a wide variety of cosmetic and other 18 believe the histological type originates 19 applications, talc has proven to be the safest among all consumer products. 20 MR. FROST: Objection to 21 "A thorough review of the literature provides no convincing 22 THE WITNESS: They don't 23 evidence that cosmetic talc when used as 23 know. They are all derivatives of			I	
variety of cosmetic and other  18 believe the histological type originates  19 applications, talc has proven to be the  20 safest among all consumer products.  21 "A thorough review of the  22 literature provides no convincing  23 evidence that cosmetic talc when used as  18 believe the histological type originates  in the human body?  20 MR. FROST: Objection to  form.  21 THE WITNESS: They don't  know. They are all derivatives of			I	
applications, talc has proven to be the safest among all consumer products.  If a many safest among			1	•
safest among all consumer products. 21 "A thorough review of the 22 literature provides no convincing 22 THE WITNESS: They don't 23 evidence that cosmetic talc when used as 23 know. They are all derivatives of		· · · · · · · · · · · · · · · · · · ·	I	
21 "A thorough review of the 21 form. 22 literature provides no convincing 22 THE WITNESS: They don't 23 evidence that cosmetic talc when used as 23 know. They are all derivatives of			I	· · · · · · · · · · · · · · · · · · ·
22 literature provides no convincing 22 THE WITNESS: They don't 23 evidence that cosmetic talc when used as 23 know. They are all derivatives of			1	2
evidence that cosmetic talc when used as 23 know. They are all derivatives of		=	I	
,			1	<del>-</del>
24 intended presents any health risk to 24 epithelioid or epithelial cells.			1	<u> </u>
		intended presents any health risk to	1 24	epithelioid or epithelial cells.

30 (Pages 114 to 117)

	Page 118		Page 120
1	But it's unclear whether they have	1	a risk factor on that mechanism as well?
2	a common precursor or whether	2	MR. FROST: Objection to
3	there are different precursors	3	form.
4	used for different histotypes.	4	THE WITNESS: No. I think
5	BY MR. SMITH:	5	that that's an open-ended question
6	Q. I'm talking about	6	on what the estrogen or the
7	specifically about serous. Do you	7	incessant ovulation does. I don't
8	understand that the large or do you	8	believe that it's linked to
9	understand that the large majority	9	chronic inflammation, for example,
10	vast majority of epithelial ovarian	10	in the ovary or in the fallopian
11	cancers diagnosed in the United States	11	tubes.
12	are serous type?	12	BY MR. SMITH:
13	A. Yes.	13	Q. Okay.
14	Q. And my question to you is,	14	A. Or that has not been
15	do you know where scientists think that	15	demonstrated.
16	the serous type histological type of	16	Q. In 2010, did IARC list talc
17	epithelial ovarian cancer originates?	17	as a possible carcinogen?
18	A. If you mean the site, it's	18	MR. FROST: Objection to
19	thought that it originates in the	19	form.
20	fallopian tubes.	20	THE WITNESS: Yes. It
21	Q. Peritoneal mesothelial cells	21	listed talc, yes.
22	line the peritoneal cavity, fallopian	22	BY MR. SMITH:
23	tubes, and ovaries of a woman, correct?	23	Q. And IARC in 2012 listed
24	A. They do, yes.	24	asbestos as a known human ovarian
	Page 119		Page 121
1	Q. Do you have an opinion about	1	carcinogen, correct?
2	what biological mechanisms or pathways	2	MR. FROST: Objection to
3	can lead to ovarian cancer?	3	form.
		3	101111.
4	A. I have an idea based upon	4	THE WITNESS: It did.
4 5	A. I have an idea based upon what I have read and that is that there		
		4	THE WITNESS: It did.
5	what I have read and that is that there	4 5	THE WITNESS: It did. BY MR. SMITH:
5 6 7 8	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect	4 5 6 7 8	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with
5 6 7 8 9	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of	4 5 6 7 8 9	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that?
5 6 7 8 9 10	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully	4 5 6 7 8 9	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that? A. No. You are going to have
5 6 7 8 9 10 11	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.	4 5 6 7 8 9 10	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that? A. No. You are going to have to refresh my on Prop 65.
5 6 7 8 9 10 11 12	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant	4 5 6 7 8 9 10 11 12	THE WITNESS: It did.  BY MR. SMITH:  Q. And in 2010, in IARC, and on  Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that?  A. No. You are going to have to refresh my on Prop 65.  Q. Prop 65 is the
5 6 7 8 9 10 11 12	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting	4 5 6 7 8 9 10 11 12	THE WITNESS: It did.  BY MR. SMITH:  Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that?  A. No. You are going to have to refresh my on Prop 65.  Q. Prop 65 is the classification in California. Are you
5 6 7 8 9 10 11 12 13	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?	4 5 6 7 8 9 10 11 12 13 14	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that? A. No. You are going to have to refresh my on Prop 65. Q. Prop 65 is the classification in California. Are you familiar with that classification
5 6 7 8 9 10 11 12 13 14 15	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is	4 5 6 7 8 9 10 11 12 13 14 15	THE WITNESS: It did.  BY MR. SMITH:  Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that?  A. No. You are going to have to refresh my on Prop 65.  Q. Prop 65 is the classification in California. Are you familiar with that classification A. I'm not familiar
5 6 7 8 9 10 11 12 13 14 15	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives	4 5 6 7 8 9 10 11 12 13 14 15	THE WITNESS: It did.  BY MR. SMITH:  Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that?  A. No. You are going to have to refresh my on Prop 65.  Q. Prop 65 is the classification in California. Are you familiar with that classification  A. I'm not familiar  Q of hazardous substance?
5 6 7 8 9 10 11 12 13 14 15 16 17	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives rise to estrogens that may influence the	4 5 6 7 8 9 10 11 12 13 14 15 16 17	THE WITNESS: It did.  BY MR. SMITH:  Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that?  A. No. You are going to have to refresh my on Prop 65.  Q. Prop 65 is the classification in California. Are you familiar with that classification  A. I'm not familiar  Q of hazardous substance?  A with the details of Prop
5 6 7 8 9 10 11 12 13 14 15 16 17	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives rise to estrogens that may influence the process of tumor development.	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	THE WITNESS: It did.  BY MR. SMITH:  Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that?  A. No. You are going to have to refresh my on Prop 65.  Q. Prop 65 is the classification in California. Are you familiar with that classification  A. I'm not familiar  Q of hazardous substance?  A with the details of Prop 65.
5 6 7 8 9 10 11 12 13 14 15 16 17 18	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives rise to estrogens that may influence the process of tumor development.  Q. What about the rupture	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that? A. No. You are going to have to refresh my on Prop 65. Q. Prop 65 is the classification in California. Are you familiar with that classification A. I'm not familiar Q of hazardous substance? A with the details of Prop 65. Q. Okay.
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives rise to estrogens that may influence the process of tumor development.  Q. What about the rupture the more than normal or abnormal rupture	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that? A. No. You are going to have to refresh my on Prop 65. Q. Prop 65 is the classification in California. Are you familiar with that classification A. I'm not familiar Q of hazardous substance? A with the details of Prop  65. Q. Okay. (Document marked for
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives rise to estrogens that may influence the process of tumor development.  Q. What about the rupture the more than normal or abnormal rupture of incessant ovulation of the egg from	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	THE WITNESS: It did.  BY MR. SMITH:  Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that?  A. No. You are going to have to refresh my on Prop 65.  Q. Prop 65 is the classification in California. Are you familiar with that classification  A. I'm not familiar  Q of hazardous substance? A with the details of Prop  65.  Q. Okay.  (Document marked for identification as Exhibit
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives rise to estrogens that may influence the process of tumor development.  Q. What about the rupture the more than normal or abnormal rupture of incessant ovulation of the egg from the ovary and causing inflammation and	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that? A. No. You are going to have to refresh my on Prop 65. Q. Prop 65 is the classification in California. Are you familiar with that classification A. I'm not familiar Q of hazardous substance? A with the details of Prop 65. Q. Okay. (Document marked for identification as Exhibit Mossman-15.)
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives rise to estrogens that may influence the process of tumor development.  Q. What about the rupture the more than normal or abnormal rupture of incessant ovulation of the egg from the ovary and causing inflammation and injury chronically? Have you not read	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that? A. No. You are going to have to refresh my on Prop 65. Q. Prop 65 is the classification in California. Are you familiar with that classification A. I'm not familiar Q of hazardous substance? A with the details of Prop 65. Q. Okay. (Document marked for identification as Exhibit Mossman-15.) BY MR. SMITH:
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	what I have read and that is that there are certainly genetic predispositions that are associated with it. There certainly is an estrogen-dependent effect or incessant ovulation, but in terms of other causes, they aren't fully understood.  Q. And what about incessant ovulation can lead to a woman contracting ovarian cancer?  A. Incessant ovulation is thought to be important because it gives rise to estrogens that may influence the process of tumor development.  Q. What about the rupture the more than normal or abnormal rupture of incessant ovulation of the egg from the ovary and causing inflammation and	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	THE WITNESS: It did. BY MR. SMITH: Q. And in 2010, in IARC, and on Prop 65, asbestiform talc is also a known human carcinogen. Are you familiar with that? A. No. You are going to have to refresh my on Prop 65. Q. Prop 65 is the classification in California. Are you familiar with that classification A. I'm not familiar Q of hazardous substance? A with the details of Prop 65. Q. Okay. (Document marked for identification as Exhibit Mossman-15.)

1 Exhibit 15, which is from OEHHA. It's 2 the Prop 65 listing of talc containing 3 asbestiform fibers. Have you seen that 4 listing, Doctor, before? 5 A. I have not. 6 Q. Have you seen the IARC 7 listing of talc-containing asbestiform 8 fibers as a Group 1 carcinogen? Have you  1 have my expert report me. 2 me. 3 BY MR. SMITH: 4 Q. In your I'm sor 5 A. Like the jargon - 6 sorry 7 Q. Go ahead. 8 A about the caus	rry
the Prop 65 listing of talc containing asbestiform fibers. Have you seen that listing, Doctor, before?  A. I have not. Q. Have you seen the IARC listing of talc-containing asbestiform  asbestiform  me. BY MR. SMITH: Q. In your I'm sor A. Like the jargon - sorry Q. Go ahead.	rry
3 asbestiform fibers. Have you seen that 4 listing, Doctor, before? 5 A. I have not. 6 Q. Have you seen the IARC 7 listing of talc-containing asbestiform 3 BY MR. SMITH: 4 Q. In your I'm sor 5 A. Like the jargon - 6 sorry 7 Q. Go ahead.	
4 listing, Doctor, before? 5 A. I have not. 6 Q. Have you seen the IARC 7 listing of talc-containing asbestiform 4 Q. In your I'm sor 5 A. Like the jargon - 6 sorry 7 Q. Go ahead.	
5 A. I have not. 5 A. Like the jargon - 6 Q. Have you seen the IARC 6 sorry 7 listing of talc-containing asbestiform 7 Q. Go ahead.	
6 Q. Have you seen the IARC 6 sorry 7 listing of talc-containing asbestiform 7 Q. Go ahead.	I'M
7 listing of talc-containing asbestiform 7 Q. Go ahead.	
The state of the s	ation
9 seen that before? 9 opinion. I I list several	opinions.
10 A. Have I seen, you mean the 10 Q. I understand.	•
11 monograph or 11 A. But causation op	oinions, I'm
12 (Document marked for 12 not certain what you mear	
identification as Exhibit 13 Q. I never saw a det	
14 Mossman-16.) 14 opinion in your report that	t says talc
15 BY MR. SMITH: 15 does not cause ovarian can	
16 Q. Yes, I'm going to attach 16 MR. FROST: Ob	jection to
that as Exhibit 16. 17 form.	
18 A. Okay. 18 THE WITNESS:	It it
19 Q. Keep it. Have you seen that 19 should have been con	veyed as such.
20 before? 20 BY MR. SMITH:	
MR. FROST: Just for the 21 Q. Okay. And we'll	l get to your
record, because it's just a 22 report in a minute.	
section of it, is this the the 23 A. Okay.	
24 2010 talc monograph? 24 Q. Well, when did y	you arrive at
Page 123	Page 125
1 MR. SMITH: Yes. It should 1 your opinions in this case?	I mean I see
2 say it on the 2 the draft report was Februa	
3 MR. FROST: Yeah, it says 3 was when it's signed.	
4 talc on the top, but it's one of 4 Surely you came to	your
5 the 5 opinions before it was draf	ted?
6 MR. SMITH: Yeah. 6 MR. FROST: Form	n.
7 BY MR. SMITH: 7 THE WITNESS: I	did. I
8 Q. Have you seen that before, 8 reviewed all the literate	
9 Doctor? 9 came to my opinions b	efore I
A. I have read this document, 10 drafted that report, which	
11 yes. 11 have been probably at	
12 Q. Okay. I looked at are 12 December or in Januar	y of this
all your opinions in this case contained 13 year.	
in your report? 14 BY MR. SMITH:	
15 A. I believe so. Yes. 15 Q. Okay. So you're s	
Q. And in your report, you 16 your opinion, you give an o	
don't give a causation opinion on 17 report that on cosmetic-g	
	or not causing
cosmetic tale and ovarian cancer, do you? 18 it causing ovarian cancer, o	
MR. FROST: Objection to 19 ovarian cancer?	
19 MR. FROST: Objection to 19 ovarian cancer? 20 form. 20 MR. FROST: Objection to	ection to
19 MR. FROST: Objection to 19 ovarian cancer? 20 form. 20 MR. FROST: Objection to 20 MR. FROST: Objection to 21 form.	
19 MR. FROST: Objection to 20 form. 21 THE WITNESS: You're 22 you're going to have to tell me  19 ovarian cancer? 20 MR. FROST: Objection to 21 form. 22 THE WITNESS: You're 22 THE WITNESS: You're 23 THE WITNESS: You're	Yeah, I'd have
19 MR. FROST: Objection to 19 ovarian cancer? 20 form. 20 MR. FROST: Objection to 20 MR. FROST: Objection to 21 form.	Yeah, I'd have

32 (Pages 122 to 125)

	5 106		D 100
	Page 126		Page 128
1	Q. Hold on a second. Had you	1	of her opinion that talc does not cause
2	formed that opinion in October 26th of	2	ovarian cancer and I need to get to the
3	2018?	3	bottom of that.
4	A. Which opinion, to answer?	4	He said, "Yeah, I understand
5	Q. That talc, cosmetic-grade	5	that. I'm trying to tell you that
6	talc does not cause ovarian cancer.	6	that not going to ask her as a broad a
7	A. Yes.	7	question as does talc cause ovarian
8	Q. You weren't able to give me	8	cancer based on all these entities.
9	that opinion in the Brower case. I	9	We're going to ask her about her research
10	specifically asked you many, many times	10	and what it means in terms of talc's
11	and your counsel objected saying she does	11	ability to cause the changes that can
12	not going to give a causation opinion.	12	lead to cancer, and then specifically the
13	She's not here to give a causation	13	testimony she's given previously
14	opinion. Do you recall that?	14	regarding her in vitro studies as well as
15	MR. FROST: Objection to	15	her review of animal studies dealing with
16	form.	16	mesothelioma and talc, and testimony
17	THE WITNESS: Yes, that	17	she's given previously about cleavage
18	was that was before I reviewed	18	fragments, and then finally her opinions
19	the scientific literature.	19	and interpretation of Lauren
20	BY MR. SMITH:	20	
21		21	Plunkett's let me rephrase that.
	Q. Well, I just asked you, did	1	The her comments on the interpretation
22	you have that opinion on October 26, 2018	22	that Lauren Plunkett provided concerning
23	and you said you did. And that's when	23	her studies as well as similar similar
24	you were deposed in Brower.	24	studies."
	Page 127		Page 129
1	MR. FROST: Objection.	1	Has that changed, that
2	THE WITNESS: Yeah, I'm not	2	you're you're going to give an opinion
3	sure what you mean about by my	3	generally that talc does not cause
4	opinion. My opinion has been	1	
		4	ovarian cancer from what your counsel
		4 5	ovarian cancer from what your counsel said you were going to do in October 26.
5	bolstered in terms of talc and	5	said you were going to do in October 26,
	bolstered in terms of talc and causation by reading since		said you were going to do in October 26, 2018?
5 6 7	bolstered in terms of talc and causation by reading since October 18th.	5 6 7	said you were going to do in October 26, 2018?  MR. FROST: Objection to
5 6 7 8	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH:	5 6 7 8	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the
5 6 7 8 9	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of	5 6 7 8 9	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is
5 6 7 8 9	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition.	5 6 7 8 9	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL
5 6 7 8 9 10 11	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a	5 6 7 8 9 10 11	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.
5 6 7 8 9 10 11 12	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you.	5 6 7 8 9 10 11 12	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.
5 6 7 8 9 10 11 12	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay.	5 6 7 8 9 10 11 12 13	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand. MR. FROST: But you can
5 6 7 8 9 10 11 12 13 14	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have	5 6 7 8 9 10 11 12 13 14	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.
5 6 7 8 9 10 11 12 13 14 15	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke?	5 6 7 8 9 10 11 12 13 14 15	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:
5 6 7 8 9 10 11 12 13 14 15	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm	5 6 7 8 9 10 11 12 13 14 15	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and
5 6 7 8 9 10 11 12 13 14 15 16 17	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm almost there.	5 6 7 8 9 10 11 12 13 14 15 16	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and your testimony in this case different
5 6 7 8 9 10 11 12 13 14 15 16 17 18	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm almost there. Okay.	5 6 7 8 9 10 11 12 13 14 15 16 17 18	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and your testimony in this case different than what you just what was said here?
5 6 7 8 9 10 11 12 13 14 15 16 17 18	bolstered in terms of talc and causation by reading since October 18th.  BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm almost there. Okay. BY MR. SMITH:	5 6 7 8 9 10 11 12 13 14 15 16 17 18	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and your testimony in this case different than what you just what was said here?  A. It's not any different. I
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm almost there. Okay. BY MR. SMITH: Q. And it goes it's 66 and	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and your testimony in this case different than what you just what was said here?  A. It's not any different. I think the emphasis is different, that I'm
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	bolstered in terms of talc and causation by reading since October 18th.  BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm almost there. Okay. BY MR. SMITH: Q. And it goes it's 66 and I'm going to go to Line 4.	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and your testimony in this case different than what you just what was said here?  A. It's not any different. I think the emphasis is different, that I'm relying upon my own research. But in
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm almost there. Okay. BY MR. SMITH: Q. And it goes it's 66 and I'm going to go to Line 4. "But that's not what she	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and your testimony in this case different than what you just what was said here?  A. It's not any different. I think the emphasis is different, that I'm relying upon my own research. But in addition, since October 18th or 26,
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm almost there. Okay. BY MR. SMITH: Q. And it goes it's 66 and I'm going to go to Line 4. "But that's not what she said and nor has she retracted. There	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and your testimony in this case different than what you just what was said here?  A. It's not any different. I think the emphasis is different, that I'm relying upon my own research. But in addition, since October 18th or 26, 2018, I have read the literature in terms
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	bolstered in terms of talc and causation by reading since October 18th. BY MR. SMITH: Q. I want to read on Page 66 of the Brower deposition. MR. FROST: Give me a second. Let me catch up to you. THE WITNESS: 66? Okay. MR. FROST: Do you have that, Brooke? THE WITNESS: Hold on. I'm almost there. Okay. BY MR. SMITH: Q. And it goes it's 66 and I'm going to go to Line 4. "But that's not what she	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	said you were going to do in October 26, 2018?  MR. FROST: Objection to form. I just want to make the record clear that Brower is obviously different than the MDL case.  MR. SMITH: I understand.  MR. FROST: But you can answer.  BY MR. SMITH:  Q. Is is your report and your testimony in this case different than what you just what was said here?  A. It's not any different. I think the emphasis is different, that I'm relying upon my own research. But in addition, since October 18th or 26,

	Page 130		Page 132
1	ovary. I've read the epidemiology. And	1	MR. SMITH: I'd like to
2	I do have an opinion that is based upon	2	attach this as the next numbered
3	the peer-reviewed scientific medical	3	Exhibit 17.
4	literature that tale is not associated	4	(Document marked for
5	with the causation of ovarian cancers.	5	identification as Exhibit
6	Q. Okay. We'll go specifically	6	Mossman-17.)
7	in your report in a minute. I just	7	BY MR. SMITH:
8	wanted to bring that question out right	8	Q. It's a printout from the
9	now.	9	website, the University of Vermont
10	You cannot tell me what the	10	Medical Center on ovarian cancer.
11	risk factors for of ovarian cancer	11	And if you go to the second
12	are, can you?	12	page, Doctor, it talks it has listed
13	A. The risk factors vary	13	here the gynecological gynecologic
14	according to the epidemiological studies.	14	oncology group with that organization.
15	Q. Do you consider tale a risk	15	Do you see that on the front page?
16	factor for ovarian cancer?	16	A. Yes. I don't know who I
17	MR. FROST: Objection to	17	don't see any names listed.
18	form.	18	Q. And this is do you see at
19	THE WITNESS: If you are	19	the top, University of Vermont Medical
20	talking about a significant, it's	20	Center? Do you see that?
21	not a simple yes or no answer.	21	A. I do.
22	I would say that it talc	22	Q. And it has ovarian cancer
23	is not a significant risk factor	23	listed at the top, correct, right under
24	for ovarian cancer.	24	the heading? Right here.
21	for ovarian cancer.	24	the heating: Right here.
	Page 131		Page 133
			1490 133
1	BY MR. SMITH:	1	A. Hold on here. Yes.
1 2	BY MR. SMITH: Q. That wasn't my question,	1 2	<ul><li>A. Hold on here. Yes.</li><li>Q. And if you flip to the</li></ul>
			A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you
2 3 4	Q. That wasn't my question,	2	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer,
2	Q. That wasn't my question, Doctor. Is tale a risk factor for ovarian cancer? MR. FROST: Objection.	2 3	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk
2 3 4	Q. That wasn't my question, Doctor. Is tale a risk factor for ovarian cancer?	2 3 4 5 6	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55,
2 3 4 5	Q. That wasn't my question, Doctor. Is tale a risk factor for ovarian cancer? MR. FROST: Objection.	2 3 4 5	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk
2 3 4 5 6 7 8	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.	2 3 4 5 6 7 8	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal
2 3 4 5 6 7	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological	2 3 4 5 6 7 8	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum
2 3 4 5 6 7 8	Q. That wasn't my question, Doctor. Is tale a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.	2 3 4 5 6 7 8 9	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary
2 3 4 5 6 7 8 9 10	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not. BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."
2 3 4 5 6 7 8 9 10 11	Q. That wasn't my question, Doctor. Is tale a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.	2 3 4 5 6 7 8 9	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?
2 3 4 5 6 7 8 9 10 11 12 13	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not. BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."
2 3 4 5 6 7 8 9 10 11	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist?	2 3 4 5 6 7 8 9 10 11 12	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?
2 3 4 5 6 7 8 9 10 11 12 13	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist? A. No, but I certainly read the	2 3 4 5 6 7 8 9 10 11 12 13	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist? A. No, but I certainly read the epidemiology.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist? A. No, but I certainly read the epidemiology. Q. So do you consider talc a	2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.  THE WITNESS: Yeah, where is this? I'm sorry. Oh, I see it, okay.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist? A. No, but I certainly read the epidemiology. Q. So do you consider talc a risk factor for ovarian cancer?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.  THE WITNESS: Yeah, where is this? I'm sorry. Oh, I see it,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist? A. No, but I certainly read the epidemiology. Q. So do you consider talc a risk factor for ovarian cancer? A. No, I don't.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.  THE WITNESS: Yeah, where is this? I'm sorry. Oh, I see it, okay.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH:  Q. Are you an epidemiologist?  A. No, but I certainly read the epidemiology.  Q. So do you consider talc a risk factor for ovarian cancer?  A. No, I don't.  Q. Okay. You are affiliated	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.  THE WITNESS: Yeah, where is this? I'm sorry. Oh, I see it, okay.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist? A. No, but I certainly read the epidemiology. Q. So do you consider talc a risk factor for ovarian cancer? A. No, I don't. Q. Okay. You are affiliated with the University of Vermont Medical	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.  THE WITNESS: Yeah, where is this? I'm sorry. Oh, I see it, okay.  BY MR. SMITH: Q. It's the third page. So you
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist? A. No, but I certainly read the epidemiology. Q. So do you consider talc a risk factor for ovarian cancer? A. No, I don't. Q. Okay. You are affiliated with the University of Vermont Medical Center, aren't you?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.  THE WITNESS: Yeah, where is this? I'm sorry. Oh, I see it, okay.  BY MR. SMITH: Q. It's the third page. So you would disagree with the University of
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. That wasn't my question, Doctor. Is tale a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH: Q. Are you an epidemiologist? A. No, but I certainly read the epidemiology. Q. So do you consider tale a risk factor for ovarian cancer? A. No, I don't. Q. Okay. You are affiliated with the University of Vermont Medical Center, aren't you? A. I am.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.  THE WITNESS: Yeah, where is this? I'm sorry. Oh, I see it, okay.  BY MR. SMITH: Q. It's the third page. So you would disagree with the University of Vermont Medical Center on whether talc is
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. That wasn't my question, Doctor. Is talc a risk factor for ovarian cancer?  MR. FROST: Objection.  THE WITNESS: I think I just answered that, that it's not a simple yes or no.  That the epidemiological studies indicate that it is not.  BY MR. SMITH:  Q. Are you an epidemiologist?  A. No, but I certainly read the epidemiology.  Q. So do you consider talc a risk factor for ovarian cancer?  A. No, I don't.  Q. Okay. You are affiliated with the University of Vermont Medical Center, aren't you?  A. I am.  Q. Is it a reputable	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Hold on here. Yes. Q. And if you flip to the second page, "Ovarian cancer, what you need to know." It says, "Ovarian cancer, what is it? Ovarian cancer risk factors." You see, "Age older than 55, obesity, reproductive history, family history of ovarian cancer, personal history of breast cancer, put talcum powder directly on genitals or sanitary napkins."  Do you see that?  MR. FROST: Objection to form.  THE WITNESS: Yeah, where is this? I'm sorry. Oh, I see it, okay.  BY MR. SMITH: Q. It's the third page. So you would disagree with the University of Vermont Medical Center on whether talc is a risk factor when put directly on the

34 (Pages 130 to 133)

	Page 134		Page 136
1	A. I rely, again, upon the	1	disagree with the University of Vermont
2	peer-reviewed scientific literature that	2	Medical Center publication that I have in
3	indicates certainly in cohort studies and	3	front of you that's Exhibit 17, that
4	case-control studies that it is not a	4	lists risk factors for ovarian cancer,
5	risk factor in ovarian cancer.	5	one being, "Put talcum powder directly on
6	MR. SMITH: I'm going to	6	genitals or sanitary napkins"? Do you
7	object as nonresponsive.	7	agree or disagree with that?
8	BY MR. SMITH:	8	MR. FROST: Objection to
9	Q. Doctor, do you disagree with	9	form.
10	the University of Vermont Medical Center	10	THE WITNESS: I disagree
11	in this publication that lists risk	11	that that is a risk factor that's
12	factors for ovarian cancer, and one	12	significant.
13	being, "Put talcum powder directly on	13	BY MR. SMITH:
14	genitals or sanitary napkins"?	14	Q. Well, hold on. Wonder if
15	MR. FROST: Objection to	15	it's not significant. Do you believe
16	form. It's not a publication.	16	that talc is a risk an insignificant
17	THE WITNESS: Yeah, and let	17	risk factor?
18	me emphasize that this isn't a	18	A. I when you say
19	MR. SMITH: And I'm I've	19	insignificant, I would I let me
20	just about had it. The speaking	20	qualify that these studies that I've read
21	objections are going to stop, or	21	in terms of the epidemiology show that it
22	I'm going to get the court in.	22	is that the risks of talc are not
23	I'm this is the last one. Your	23	significant.
24	speaking objections	24	Q. So, there is some risk of
	1 5 3		,
	Page 135		Page 137
	3		rage 137
1	MR. FROST: Sure. I was	1	talc applied to the genitals in its
2	MR. FROST: Sure. I was just	1 2	
	MR. FROST: Sure. I was just MR. SMITH: Object to form.		talc applied to the genitals in its
2	MR. FROST: Sure. I was just	2	talc applied to the genitals in its relation to ovarian cancer. You just say
2	MR. FROST: Sure. I was just MR. SMITH: Object to form. MR. FROST: I was just making it clear to you what your	2 3	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.
2 3 4 5 6	MR. FROST: Sure. I was just MR. SMITH: Object to form. MR. FROST: I was just making it clear to you what your objection is so you can	2 3 4 5 6	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm
2 3 4 5 6 7	MR. FROST: Sure. I was just MR. SMITH: Object to form. MR. FROST: I was just making it clear to you what your objection is so you can MR. SMITH: I don't need it.	2 3 4 5	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the
2 3 4 5 6 7 8	MR. FROST: Sure. I was just MR. SMITH: Object to form. MR. FROST: I was just making it clear to you what your objection is so you can MR. SMITH: I don't need it. I don't need any speaking. I need	2 3 4 5 6	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm
2 3 4 5 6 7 8 9	MR. FROST: Sure. I was just MR. SMITH: Object to form. MR. FROST: I was just making it clear to you what your objection is so you can MR. SMITH: I don't need it. I don't need any speaking. I need to form. And I'm done with it.	2 3 4 5 6 7 8 9	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.
2 3 4 5 6 7 8 9	MR. FROST: Sure. I was just MR. SMITH: Object to form. MR. FROST: I was just making it clear to you what your objection is so you can MR. SMITH: I don't need it. I don't need any speaking. I need to form. And I'm done with it. I've given you plenty of warnings.	2 3 4 5 6 7 8 9	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it. I don't need any speaking. I need to form. And I'm done with it. I've given you plenty of warnings.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as
2 3 4 5 6 7 8 9 10 11	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or	2 3 4 5 6 7 8 9 10 11 12	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of
2 3 4 5 6 7 8 9 10 11 12 13	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website	2 3 4 5 6 7 8 9 10 11 12 13	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of
2 3 4 5 6 7 8 9 10 11 12 13	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical	2 3 4 5 6 7 8 9 10 11 12 13 14	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a
2 3 4 5 6 7 8 9 10 11 12 13 14 15	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it. I don't need any speaking. I need to form. And I'm done with it. I've given you plenty of warnings. BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum powder is a dose-related risk in ovarian	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be defining significant and insignificant in
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum powder is a dose-related risk in ovarian cancer based upon the peer-reviewed	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum powder is a dose-related risk in ovarian cancer based upon the peer-reviewed scientific literature.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be defining significant and insignificant in
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum powder is a dose-related risk in ovarian cancer based upon the peer-reviewed	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be defining significant and insignificant in different terms.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum powder is a dose-related risk in ovarian cancer based upon the peer-reviewed scientific literature.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be defining significant and insignificant in different terms.  So are you saying that there
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum powder is a dose-related risk in ovarian cancer based upon the peer-reviewed scientific literature.  Q. Ma'am, that's	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be defining significant and insignificant in different terms.  So are you saying that there is some risk, albeit small, of genital
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum powder is a dose-related risk in ovarian cancer based upon the peer-reviewed scientific literature.  Q. Ma'am, that's  MR. SMITH: I'm going to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be defining significant and insignificant in different terms.  So are you saying that there is some risk, albeit small, of genital application of talc and ovarian cancer?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. FROST: Sure. I was just  MR. SMITH: Object to form.  MR. FROST: I was just making it clear to you what your objection is so you can  MR. SMITH: I don't need it.  I don't need any speaking. I need to form. And I'm done with it.  I've given you plenty of warnings.  BY MR. SMITH:  Q. Ma'am, do you disagree or agree with what I printed off the website of the University of Vermont Medical Center on ovarian cancer risks?  A. I disagree that talcum powder is a dose-related risk in ovarian cancer based upon the peer-reviewed scientific literature.  Q. Ma'am, that's  MR. SMITH: I'm going to object to nonresponsiveness.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	talc applied to the genitals in its relation to ovarian cancer. You just say it's small.  MR. FROST: Objection to form.  THE WITNESS: No. I'm saying it's insignificant in the scientific peer-reviewed literature.  BY MR. SMITH:  Q. Well, what do you define as insignificant? Because any risk to me of getting one of the most deadly forms of cancer, any risk at all that has on a product that has no health benefit is significant to me. So we could be defining significant and insignificant in different terms.  So are you saying that there is some risk, albeit small, of genital application of talc and ovarian cancer?  MR. FROST: Objection to

35 (Pages 134 to 137)

		1	
	Page 138		Page 140
1	from a scientist who has looked at	1	epidemiology primarily.
2	the risk, relative risks, in	2	BY MR. SMITH:
3	cohort studies and all of these	3	Q. Ma'am I'm going to need you
4	indicate that talcum powder is not	4	to be more specific. We're here to get
5	a significant risk in ovarian	5	your opinions. I don't need
6	cancer causation.	6	generalities.
7	BY MR. SMITH:	7	MR. FROST: I'm going to say
8	Q. Well, when you say	8	Okay. She's you've got to let
9	significant not a significant risk,	9	her finish her answer. She's
10	it's still your answer implies that	10	going to follow up.
11	there is still some risk, okay.	11	THE WITNESS: So let's talk
12	My question to you is,	12	about I have three reasons for
13	however small or however significant or	13	that statement, the first and most
14	not, is there some risk in its in the	14	important being the epidemiology;
15	application genital application of	15	that is, the cohort studies, all
16	talc and the risk of ovarian cancer?	16	
17	MR. FROST: Objection to	17	of the four, looking at thousands
	, and the second	18	of individuals, do not indicate
18	form.	1	that talcum powder is a risk in
19	THE WITNESS: All I'm saying	19	the development of ovarian cancer,
20	is that no, it's not a simple yes	20	and they state it as such.
21	or no answer, that as a scientist,	21	I also would base
22	looking at the literature, that	22	BY MR. SMITH:
23	talc powder is not a statistically	23	Q. Well okay. I'm going
24	significant risk factor in the	24	to I want to let's just break each
	Page 139		Page 141
1	causation of ovarian cancer.	1	one down specifically.
2	BY MR. SMITH:	2	A. Okay.
3	Q. What do you base that on?	3	Q. All of those cohort studies
4	MR. FROST: Objection to	4	find a non-statistical increased risk,
5	form.	5	correct?
6	THE WITNESS: All right. Do	6	MR. FROST: Objection to
7	you want me to start with my	7	form.
8	opinions?	8	THE WITNESS: Again, if it's
9	BY MR. SMITH:	9	not statistical, it can be chance.
10	Q. I want to know what you base	10	We're talking about a risk less
11	that statement on.	11	than twofold, and in the field of
12	A. Okay.	12	epidemiology and in the field of
13	Q. I don't need your opinions.	13	biology in general, one looks at a
14	I know what they are. We're going to get	14	risk or a relative risk and it
15			
16	to them. I need to know what do you base	15	generally becomes significant when
	that the genital application of talc by a	16	it's above two.
17	woman in the epidemiological studies does not provide or show a statistically	17	None of those studies show
1 0	not provide or chow a ctatictically	18	an observed risk or relative risk
18			
19	significant increased risk of ovarian	19	of greater than two.
19 20	significant increased risk of ovarian cancer?	20	BY MR. SMITH:
19 20 21	significant increased risk of ovarian cancer?  MR. FROST: Objection to	20 21	BY MR. SMITH: Q. So you're saying to have a
19 20 21 22	significant increased risk of ovarian cancer?  MR. FROST: Objection to form.	20 21 22	BY MR. SMITH:  Q. So you're saying to have a substance be a risk factor for causing
19 20 21 22 23	significant increased risk of ovarian cancer?  MR. FROST: Objection to form.  THE WITNESS: Again, I can	20 21 22 23	BY MR. SMITH:  Q. So you're saying to have a substance be a risk factor for causing disease, that you need a relative risk in
19 20 21 22	significant increased risk of ovarian cancer?  MR. FROST: Objection to form.	20 21 22	BY MR. SMITH:  Q. So you're saying to have a substance be a risk factor for causing

36 (Pages 138 to 141)

	Page 142		Page 144
1	A. In general, but you also can	1	exposure history, or did the cohort
2	exclude risks that are lower than that if	2	studies just look at frequency or just
3	they aren't statistically significant.	3	look at duration? Do you know?
4	Q. Do you understand that	4	MR. FROST: Objection to
5	statistical significance in some of those	5	form.
6	cohort studies might be because they did	6	THE WITNESS: I again I'd
7	not have enough people to power the	7	have to go back. If you've got a
8	study?	8	copy of the studies I'd be happy
9	MR. FROST: Objection.	9	to comment on that.
10	BY MR. SMITH:	10	BY MR. SMITH:
11	Q. Have you looked at any of	11	Q. Well, let me ask you a
12	that?	12	question. To get an accurate exposure
13	MR. FROST: Objection to	13	history, wouldn't you agree with me that
14	form.	14	you need both frequency and duration to
15	THE WITNESS: I'm not I'm	15	get the most accurate exposure history in
16	not an epidemiologist. I'm not	16	a woman?
17	going to go into the shortcomings	17	MR. FROST: Objection to
18	of these studies. But there are	18	form.
19	thousands of individuals and they	19	THE WITNESS: Yeah. That
20	did have the power to detect other	20	would be a question for an
21	risk factors such as genetic	21	epidemiologist.
22	susceptibility.	22	I can't comment on the
23	BY MR. SMITH:	23	relative importance of frequency,
24	Q. Well, do you know whether or	24	duration, or dose.
	Page 143		Page 145
1	not these cohorts assessed whether they	1	BY MR. SMITH:
2	were genital talc users at one period and	2	Q. Okay. So if I asked you how
3	followed up to see if they continued as	3	many times a year you used genital talc,
4	chronic users, or did they just ask them	4	and you told me how many times a year,
5	at one point in time?	5	you you said excuse me.
6	MR. FROST: Objection to		
	interitosi. Cojection to	6	How frequently you used
7	form.	6 7	•
7 8	· · · · · · · · · · · · · · · · · · ·	l	How frequently you used
	form.	7	How frequently you used talc, and you said twice a week. How
8	form.  THE WITNESS: I cannot go	7 8	How frequently you used tale, and you said twice a week. How would I ever know what the applications
8 9 10 11	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.	7 8 9 10 11	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the
8 9 10 11 12	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of	7 8 9 10	How frequently you used talc, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?
8 9 10 11 12 13	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not	7 8 9 10 11 12 13	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a
8 9 10 11 12 13	form. THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies. They had fairly reputable talc histories. And they did not show either a statistical increase	7 8 9 10 11 12 13	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I
8 9 10 11 12 13 14 15	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also	7 8 9 10 11 12 13 14 15	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual
8 9 10 11 12 13 14 15	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was	7 8 9 10 11 12 13 14 15	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided
8 9 10 11 12 13 14 15 16	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was consistency or dose-response based	7 8 9 10 11 12 13 14 15 16 17	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided in these studies.
8 9 10 11 12 13 14 15 16 17	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was consistency or dose-response based on frequency or duration. And	7 8 9 10 11 12 13 14 15 16 17	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided in these studies.  But at the time they were
8 9 10 11 12 13 14 15 16 17 18	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was consistency or dose-response based on frequency or duration. And those are other important	7 8 9 10 11 12 13 14 15 16 17 18	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided in these studies.  But at the time they were the best questionnaires that could
8 9 10 11 12 13 14 15 16 17 18 19 20	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was consistency or dose-response based on frequency or duration. And those are other important variables to consider.	7 8 9 10 11 12 13 14 15 16 17 18 19 20	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided in these studies.  But at the time they were the best questionnaires that could be gleaned in terms of personal
8 9 10 11 12 13 14 15 16 17 18 19 20 21	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was consistency or dose-response based on frequency or duration. And those are other important variables to consider.  BY MR. SMITH:	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided in these studies.  But at the time they were the best questionnaires that could be gleaned in terms of personal history of use.
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was consistency or dose-response based on frequency or duration. And those are other important variables to consider.  BY MR. SMITH:  Q. Do you know if any of these	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided in these studies.  But at the time they were the best questionnaires that could be gleaned in terms of personal history of use.  BY MR. SMITH:
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was consistency or dose-response based on frequency or duration. And those are other important variables to consider.  BY MR. SMITH:  Q. Do you know if any of these studies took into account frequency and	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided in these studies.  But at the time they were the best questionnaires that could be gleaned in terms of personal history of use.  BY MR. SMITH:  Q. So you are relying on the
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	form.  THE WITNESS: I cannot go through the details. All I can tell you is the bottom lines of these studies.  They had fairly reputable talc histories. And they did not show either a statistical increase in relative risk, but they also did not show that there was consistency or dose-response based on frequency or duration. And those are other important variables to consider.  BY MR. SMITH:  Q. Do you know if any of these	7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	How frequently you used tale, and you said twice a week. How would I ever know what the applications were in a year if I don't know the duration?  MR. FROST: Objection to form.  THE WITNESS: Yeah, that's a question for an epidemiologist. I don't have the actual questionnaires that were provided in these studies.  But at the time they were the best questionnaires that could be gleaned in terms of personal history of use.  BY MR. SMITH:

37 (Pages 142 to 145)

			1
	Page 146		Page 148
1	epidemiological cohort studies that talc	1	form.
2	does not significantly increase the risk	2	THE WITNESS: Yeah, I
3	of ovarian cancer. You cannot tell me in	3	again, I would have to look at
4	the cohorts how many times they asked the	4	those studies. I don't recall the
5	question of if these women are genital	5	details. But they attempted to do
6	talc users or followed up to see if they	6	frequency and dose-response in the
7	were genital talc users, correct?	7	studies.
8	MR. FROST: Objection to	8	BY MR. SMITH:
9	form.	9	Q. Can you tell me if they
10	THE WITNESS: Again, I'd	10	allowed for an adequate latency period or
11	have to look at the studies. I've	11	follow-up period for the women for a
12	read them. I can't recall. There	12	latency latent injury and disease like
13	are four of them. And I can't	13	ovarian cancer, do you know if they
14	recall whether the questionnaire	14	allowed for an adequate exposure
15	information was in detail in those	15	latency exposure period?
16	publications.	16	MR. FROST: Objection to
17	The important point is that	17	form.
18	regardless of the questionnaire,	18	THE WITNESS: Yeah,
19	and the talc use that was	19	certainly the follow-up studies in
20	documented, there was not an	20	the Nurses' Health Study did. And
21	increase in dose-response or	21	since we don't know the latency of
22	frequency which gives additional	22	development, we I can't really
23	weight to the epidemiology that is	23	answer that question.
24	the relative risk that talc	24	BY MR. SMITH:
24	the relative risk that tale	24	BT WK. SWITH.
	Page 147		Page 149
1	doesn't cause ovarian cancer.	1	Q. So that's what else do
2	BY MR. SMITH:	2	you rely on to say that talc doesn't
3	Q. Well, if you're going to use	3	significantly increase the risk of
4	dose-response as one of the factors that	4	ovarian cancer?
5	you're in these cohorts that you're	5	A. The fact that there have
6	relying on to say that talc does not	6	been many animal studies, including those
7	significantly increase the risk of	7	that have injected talc directly into the
8	ovarian cancer, and you can't tell me	8	ovary and those have not given rise to
9	whether these studies looked at frequency	9	ovarian cancers or mesotheliomas.
10	and duration to get an accurate exposure	10	Q. Did they show adverse
11	history, that would all factor in to	11	cellular changes?
12	whether you get a dose-response	12	A. You'll have to define
13	relationship is a little baffling.	13	adverse cellular change.
14	Do you know whether or not	14	Q. Did they show a reaction to
15	that these four cohort studies that	15	tale?
16	you're relying on, based on lack of	16	A. I'm sure they must have.
17	dose-response, that talc is not a	17	Q. Did you look at any other
18	significant increased risk of ovarian	18	epidemiological studies besides the
19	cancer, whether or not all four studies	19	cohorts to arrive at your opinion that
20	looked at both frequency and duration to	20	talc does not significantly increase the
21	get an accurate exposure history that	21	risk of ovarian cancer?
22	would relate to an adequate dose-response	22	A. Yes. I looked at the
23	answer to the question?	23	case-control studies of which I believe
24	MR. FROST: Objection to	24	two out of I think there are at least
i -		1	

38 (Pages 146 to 149)

1 14 or maybe even more, probably between 2 14 and 20 studies, on the majority of 3 those did not show significant risks. 4 And none of them showed an increase with 5 frequency or dose of tale. 6 Q. Did not show a significant 7 increase in risk. 8 A. Mm-hmm. 9 Q. You mean the majority of 10 them did not show a statistical 11 significant increased risk of for 12 ovarian cancer? 13 A. The majority of them did not 14 show a statistically significant risk for 15 ovarian cancer that was related to dose 16 and duration of exposure. 17 Q. Well, hold on a second. 18 Let's dose-response is totally 19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital talc 4 A. I haven't looked 2 Q. Any post 2010 a experience experiments 4 that in Brower. Had you we talked about IARC in monograph. 5 we talked about IARC in monograph. 6 monograph. 7 A. Right. 8 Q. And you'd said y monograph; is that correc and monograph; is that correct and monograph;	nimal . I asked you ooked at any 2010, the cou had not ies post that
2 14 and 20 studies, on the majority of 3 those did not show significant risks. 4 And none of them showed an increase with 5 frequency or dose of tale. 6 Q. Did not show a significant 7 increase in risk. 8 A. Mm-hmm. 9 Q. You mean the majority of 10 them did not show a statistical 11 significant increased risk of for 12 ovarian cancer? 13 A. The majority of them did not 14 show a statistically significant risk for 15 ovarian cancer that was related to dose 16 and duration of exposure. 17 Q. Well, hold on a second. 18 Let's dose-response is totally 19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority 2 Q. Any post 2010 a 2 experience experiments 4 that in Brower. Had you we talked about IARC in monograph. 7 A. Right. 9 Q. And you'd said y monograph; is that correc 11 and monograph; is that correc 12 since 2010. 13 Q. Yes. 14 A. Correct. 15 Q. And if the mono published in 2010, you re 16 published in 2010, you re 17 of those studies occurred 18 Let's dose-response is totally 19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority 25 Sanda A. Right. 26 M. Right. 7 A. Right. 8 Q. And you'd said y monograph; is that correc 11 and monograph; is that correc 12 of the case-response is to a correct 13 Q. Yes. 14 A. Correct. 15 Q. And if the mono published in 2010, you re 20 of those studies occurred 21 published in 2010, you re 22 of these studies occurred 23 concologist: 24 Q. Okay. So you re 25 or I don't know what term 26 risk of ovarian cancer from genital talc 27 or I don't know what term 28 Bolstered your opinion by	nimal . I asked you ooked at any 2010, the cou had not ies post that
those did not show significant risks.  And none of them showed an increase with frequency or dose of talc.  Q. Did not show a significant increase in risk.  A. Mm-hmm. Q. You mean the majority of plooked at any animal stud monograph; is that correct increased risk of for povarian cancer?  A. The majority of them did not povarian cancer that was related to dose and duration of exposure.  Q. Well, hold on a second.  Let's dose-response is totally separate from whether you you find a pot ovarian cancer from genital talc use a statistically significant increased risk of ovarian cancer from genital talc use a statistically significant increased risk on or lodgist.  Page 151  to of the case-control studies did not show a statistically significant increased risk or or lodn't know what term risk of ovarian cancer from genital talc  a statistically significant increased risk on or lodn't know what term risk of ovarian cancer from genital talc  Bolstered your opinion by	. I asked you ooked at any 2010, the ou had not tes post that
4 And none of them showed an increase with 5 frequency or dose of talc. 6 Q. Did not show a significant increase in risk. 8 A. Mm-hmm. 9 Q. You mean the majority of 10 them did not show a statistical 11 significant increased risk of for 12 ovarian cancer? 13 A. The majority of them did not 14 show a statistically significant risk for 15 ovarian cancer that was related to dose 16 and duration of exposure. 17 Q. Well, hold on a second. 18 Let's dose-response is totally 19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority 25 we talked about IARC in monograph. 26 Metalked about IARC in monograph. 3 Let k a. Right. 3 N. Right. 4 A. Right. 5 Metalked about IARC in monograph. 3 A. Right. 4 A. Right. 5 Metalked about IARC in monograph. 6 Monograph. 6 D. A. Right. 7 A. Right. 8 Q. And you'd said y looked at any animal stud monograph; is that correc and monograph; is that correct and monograph; is that correc and monograph; is that correct and	ooked at any 2010, the ou had not les post that
frequency or dose of talc.  Q. Did not show a significant increase in risk.  A. Mm-hmm. Q. You mean the majority of them did not significant risk for ovarian cancer that was related to dose and duration of exposure.  Q. Well, hold on a second.  Let's dose-response is totally separate from whether you you find a case-control study. Let's break it down.  Page 151  frequency or dose of talc. Q. Did not show a significant increased in risk.  Me talked about IARC in monograph.  A. Right. Q. And you'd said y looked at any animal stud monograph; is that correct in the monograph; is that correct in the since 2010.  A. That had been province 2010.  A. Correct.  Q. Yes.  A. Correct.  Q. And if the monograph; is that correct in the province and duration of exposure.  Q. Well, hold on a second.  Let's dose-response is totally in a case-control study. Let's break it down.  Page 151  of the case-control studies did not show a statistically significant increased in a summary or giving credibition or I don't know what term risk of ovarian cancer from genital talc in a summary or giving credibition or I don't know what term risk of ovarian cancer from genital talc in a summary or giving credibition or I don't know what term risk of ovarian cancer from genital talc in a summary or giving credibition or I don't know what term risk of ovarian cancer from genital talc in a summary or giving credibition in the them and the majority in the talk and th	2010, the rou had not less post that e?
6 Q. Did not show a significant 7 increase in risk. 8 A. Mm-hmm. 9 Q. You mean the majority of 10 them did not show a statistical 11 significant increased risk of for 12 ovarian cancer? 13 A. The majority of them did not 14 show a statistically significant risk for 15 ovarian cancer that was related to dose 16 and duration of exposure. 17 Q. Well, hold on a second. 18 Let's dose-response is totally 19 separate from whether you you find a 20 g. Ves. 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority 2 a statistically significant increased 3 risk of ovarian cancer from genital talc 3 Bolstered your opinion by 2 a statistically significant increased 3 risk of ovarian cancer from genital talc  7 A. Right. 8 Q. And you'd said y 9 looked at any animal stud monograph; is that correc 11 a looked at any animal stud monograph. 10 monograph. 11 A. That had been proposed to monograph; is that correc 11 A. That had been proposed to monograph; is that correc 12 since 2010. 13 Q. Yes. 14 A. Correct. 15 Q. And if the monograph. 16 published in 2010, you resource of those studies occurred of those	ou had not les post that?
7 increase in risk. 8 A. Mm-hmm. 9 Q. You mean the majority of 10 them did not show a statistical 11 significant increased risk of for 12 ovarian cancer? 13 A. The majority of them did not 14 show a statistically significant risk for 15 ovarian cancer that was related to dose 16 and duration of exposure. 17 Q. Well, hold on a second. 18 Let's dose-response is totally 19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control studies. 24 You're saying the majority 2 a statistically significant increased 3 risk of ovarian cancer from genital talc 3 Bolstered your opinion by 2 a statistically significant increased 3 risk of ovarian cancer from genital talc  8 Q. And you'd said y 9 looked at any animal stud monograph; is that correc 10 A. That had been prosince 2010. 11 A. That had been prosince 2010. 12 A. Correct. 13 Q. Yes. 14 A. Correct. 15 Q. And if the mono published in 2010, you reconstructed of those studies occurred of those studies occurred of those studies occurred 2010. 18 2010? 19 A. Yes. 20 Q. Dr. Saenz, is she epidemiologist? 21 of ovarian cancer from genital talc use 22 A. I believe that she oncologist. 23 oncologist. 24 You're saying the majority 24 Q. Okay. So you reconstructed a statistically significant increased 2 or I don't know what term 1 risk of ovarian cancer from genital talc 3 Bolstered your opinion by	ies post that
8 A. Mm-hmm. 9 Q. You mean the majority of 10 them did not show a statistical 11 significant increased risk of for 12 ovarian cancer? 13 A. The majority of them did not 14 show a statistically significant risk for 15 ovarian cancer that was related to dose 16 and duration of exposure. 17 Q. Well, hold on a second. 18 Let's dose-response is totally 19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority 28 Q. And you'd said y 9 looked at any animal stud 10 monograph; is that correct 11 A. That had been properate in the correct of the since 2010. 12 since 2010. 13 Q. Yes. 14 A. Correct. 15 Q. And if the mono published in 2010, you resemblished in 2010, you resemblished in 2010, you resemblished in 2010? 18 Let's dose-response is totally 19 separate from whether you you find a 20 p. Dr. Saenz, is sheen epidemiologist? 21 of ovarian cancer from genital talc use 22 p. Dr. Saenz, is sheen epidemiologist? 23 down. 24 You're saying the majority 25 A. I believe that sheen oncologist. 26 Page 151 27 Okay. So you resemblished in 2010, you re	ies post that
9 Q. You mean the majority of them did not show a statistical 10 monograph; is that correct significant increased risk of for 11 A. That had been provided in covarian cancer? 12 since 2010.  13 A. The majority of them did not 13 Q. Yes.  14 show a statistically significant risk for 14 A. Correct.  15 ovarian cancer that was related to dose 15 Q. And if the mono and duration of exposure. 16 published in 2010, you result of those studies occurred 18 Let's dose-response is totally 18 2010?  19 separate from whether you you find a 19 A. Yes.  20 statistically significant increased risk 20 Q. Dr. Saenz, is sheed of ovarian cancer from genital talc use 21 epidemiologist?  21 of ovarian cancer from genital talc use 21 epidemiologist.  22 in a case-control study. Let's break it 22 A. I believe that sheed oncologist.  24 You're saying the majority 24 Q. Okay. So you result of the case-control studies did not show 2 a statistically significant increased 2 or I don't know what term 2 risk of ovarian cancer from genital talc 3 Bolstered your opinion by	ies post that
them did not show a statistical significant increased risk of for covarian cancer?  A. That had been proportions increased risk of for covarian cancer?  A. The majority of them did not covarian cancer that was related to dose covarian cancer from whether you you find a covarian cancer from whether you you find a covarian cancer from genital talc use covarian cancer from genital talc covarian cancer from	?
11 significant increased risk of for ovarian cancer? 12 ovarian cancer? 13 A. The majority of them did not 13 Q. Yes. 14 show a statistically significant risk for 14 A. Correct. 15 ovarian cancer that was related to dose 15 Q. And if the mono 16 and duration of exposure. 16 and duration of exposure. 17 Q. Well, hold on a second. 18 Let's dose-response is totally 18 2010? 19 separate from whether you you find a 20 Q. Dr. Saenz, is she 20 statistically significant increased risk 20 Q. Dr. Saenz, is she 21 of ovarian cancer from genital talc use 21 epidemiologist? 22 in a case-control study. Let's break it 22 A. I believe that she 23 down. 24 You're saying the majority 24 Q. Okay. So you response is to 15 Q. And if the mono 20 published in 2010, you response is totally 20 published in 2010, you response is totally 20 of those studies occurred 20 published in 2010, you response is totally 20 Q. Dr. Saenz, is she 20 Q. Dr. Saenz, is she 21 epidemiologist? 22 in a case-control study. Let's break it 22 A. I believe that she 23 down. 23 oncologist. 24 You're saying the majority 24 Q. Okay. So you response is 24 a statistically significant increased 2 or I don't know what term 25 risk of ovarian cancer from genital talc 3 Bolstered your opinion by	
12 since 2010.  13 A. The majority of them did not 14 show a statistically significant risk for 15 ovarian cancer that was related to dose 16 and duration of exposure. 17 Q. Well, hold on a second. 18 Let's dose-response is totally 19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority  Page 151  1 of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital talc  1 summary or giving credibing or I don't know what term 2 Bolstered your opinion by	
show a statistically significant risk for ovarian cancer that was related to dose and duration of exposure.  Q. Well, hold on a second. Let's dose-response is totally separate from whether you you find a statistically significant increased risk of ovarian cancer from genital talc use in a case-control study. Let's break it down.  Page 151  of the case-control studies did not show a statistically significant increased	
show a statistically significant risk for ovarian cancer that was related to dose and duration of exposure.  Q. Well, hold on a second.  Let's dose-response is totally separate from whether you you find a statistically significant increased risk of ovarian cancer from genital talc use in a case-control study. Let's break it down.  Page 151  show a statistically significant increased for the case-control studies did not show a statistically significant increased for the case-control studies did not show a statistically significant increased for the case-control studies did not show a statistically significant increased for I don't know what term risk of ovarian cancer from genital talc  Bolstered your opinion by	
ovarian cancer that was related to dose and duration of exposure.  Q. Well, hold on a second. Let's dose-response is totally separate from whether you you find a statistically significant increased risk of ovarian cancer from genital talc use in a case-control study. Let's break it down.  Page 151  of the case-control studies did not show a statistically significant increased statistically significant increased statistically significant increased risk oncologist.  Page 151  of the case-control studies did not show a statistically significant increased statis	
and duration of exposure.  Q. Well, hold on a second.  Let's dose-response is totally separate from whether you you find a control of ovarian cancer from genital talc use in a case-control study. Let's break it down.  Page 151  of the case-control studies did not show a statistically significant increased risk of ovarian cancer from genital talc  Page 151  summary or giving credibit or I don't know what term risk of ovarian cancer from genital talc  Bolstered your opinion by	graph is
17 Q. Well, hold on a second.  18 Let's dose-response is totally 19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority  Page 151  1 of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital talc  17 of those studies occurred 18 2010?  A. Yes. 20 Q. Dr. Saenz, is she epidemiologist? 21 epidemiologist? 22 A. I believe that she oncologist. 24 Q. Okay. So you result of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital talc 3 Bolstered your opinion by	
Let's dose-response is totally  19 separate from whether you you find a 20 statistically significant increased risk 21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority  Page 151  1 of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital talc  18 2010?  19 A. Yes. 20 Q. Dr. Saenz, is she epidemiologist?  21 epidemiologist?  A. I believe that she oncologist. 22 Q. Okay. So you result in summary or giving credible or I don't know what term is a statistically significant increased 3 Bolstered your opinion by	
separate from whether you you find a statistically significant increased risk Q. Dr. Saenz, is she of ovarian cancer from genital talc use in a case-control study. Let's break it down. So you're saying the majority Page 151  1 of the case-control studies did not show a statistically significant increased risk Q. Okay. So you're results of ovarian cancer from genital talc Results A. I believe that she oncologist. Q. Okay. So you're Results Summary or giving credible Q. Okay. So you're Q. Okay. So you	, 611 0 61016
20 statistically significant increased risk 20 Q. Dr. Saenz, is she 21 of ovarian cancer from genital talc use 21 epidemiologist?  22 in a case-control study. Let's break it 22 A. I believe that she 23 down.  24 You're saying the majority 24 Q. Okay. So you result of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital talc 3 Bolstered your opinion by	
21 of ovarian cancer from genital talc use 22 in a case-control study. Let's break it 23 down. 24 You're saying the majority  Page 151  1 of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital talc  21 epidemiologist?  A. I believe that sho oncologist.  Q. Okay. So you result to summary or giving credible or I don't know what term  Bolstered your opinion by	an
22 in a case-control study. Let's break it 23 down. 24 You're saying the majority  22 A. I believe that she 23 oncologist. 24 Q. Okay. So you re  Page 151  1 of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital tale 3 Bolstered your opinion by	
23 down. 24 You're saying the majority  23 oncologist. 24 Q. Okay. So you re  Page 151  1 of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital tale 3 oncologist. 24 Q. Okay. So you re  2 or I don't know what term 3 Bolstered your opinion by	is an
Page 151  1 of the case-control studies did not show 2 a statistically significant increased 3 risk of ovarian cancer from genital talc 2 Q. Okay. So you respectively. Q. Okay. Q. Okay. So you respectively. Q. Okay. Q.	15 411
Page 151  1 of the case-control studies did not show 2 a statistically significant increased 2 or I don't know what term 3 risk of ovarian cancer from genital talc 3 Bolstered your opinion by	lied on the
1 of the case-control studies did not show 2 a statistically significant increased 2 or I don't know what term 3 risk of ovarian cancer from genital talc 3 Bolstered your opinion by	
2 a statistically significant increased 2 or I don't know what term 3 risk of ovarian cancer from genital tale 3 Bolstered your opinion by	Page 153
3 risk of ovarian cancer from genital talc 3 Bolstered your opinion by	
4 is a sympostagical appola	
	ist on the
5 A. Yes. 5 epidemiology.	
6 Q. Okay. 6 MR. FROST: Ob	ection to
7 MR. FROST: Objection to 7 form.	
8 form. 8 BY MR. SMITH:	
9 BY MR. SMITH: 9 Q. Is that correct?	
Q. What other epidemiological 10 A. Yes. I think she	
studies did you look at? Any? 11 very cogent review, and al	
A. I looked at the summary of 2 Dr. Diette, I read his exper	
the reports by Dr. Saenz and Dr. Diette 13 he gives a, again, I feel a b	alanced
which covered these beautifully. So my 14 good overview of the strength	
opinions are certainly bolstered by their 15 weaknesses of the studies.	
16 reports. 16 Q. Did you do an in	gths and
Q. So your opinions are 17 review of the strengths and	gths and dependent
bolstered by two defense experts? 18 every epidemiological students.	gths and dependent d weaknesses of
19 A. That is after I wrote my 19 discussed, that being the c	gths and dependent d weaknesses of dy that you just
report. So my original observations are 20 studies and the cohorts?	gths and dependent d weaknesses of dy that you just
based on epidemiology and animal 21 MR. FROST: Ob	gths and dependent d weaknesses of dy that you just ase-control
22 experiments and mechanistic studies. 22 THE WITNESS:	dependent depend
Q. You haven't looked at any 23 wrote my report. I did	gths and dependent d weaknesses of dy that you just ase-control ection. I did before I
24 animal experiments since 2010, right? 24 it in my report. I look	dependent I weaknesses of ly that you just ase-control ection. I did before I ln't cover

39 (Pages 150 to 153)

	Page 154		Page 156
1	these studies, however. I read	1	specific strengths and weaknesses of the
2	them, and I looked at their	2	Nurses' Health studies that you examined
3	abstracts as well for their	3	to give weight or non-weight to those
4	significance.	4	particular cohort studies.
5	BY MR. SMITH:	5	A. Okay.
6	Q. What basis do you have to	6	MR. FROST: Objection to
7	rely on the strengths and weaknesses of	7	form.
8	epidemiological study when you say you're	8	THE WITNESS: So I'm going
9	not an epidemiologist or not an expert in	9	to give two without going back to
10	epidemiology?	10	the papers, which aren't in front
11	MR. FROST: Object to form.	11	of me.
12	THE WITNESS: Epidemiology	12	There would not be the
13	is something throughout the years	13	issues of recall bias in those
14	that I've had to comment upon in	14	studies as there would have been
15	all of my published materials in	15	in case-control studies.
16	trying to make correlations	16	And there would not have
17	between what I observe and what's	17	been misclassification of tumors
18	been observed in epidemiology.	18	because these are prospective
19	So I am not one to question	19	studies.
20	or critique the studies in terms	20	Other than that, I could not
21	of their individual positive or	21	comment unless I have the study in
22	negative features. But all the	22	front of me.
23	studies say the same thing,	23	BY MR. SMITH:
24	especially the cohort studies.	24	Q. That your statement that
	especially the conort studies.		Q. That your statement that
	Page 155		Page 157
1	BY MR. SMITH:	1	you just made is a statement that could
2	Q. Well, if you're going to	2	be made generally about any cohort versus
3	give weight to certain evidence and not	3	case-control study, correct?
4	weight to certain evidence to arrive at	4	MR. FROST: Objection.
5	an opinion, and you're not you're not	5	THE WITNESS: You'd have to
6	specifically look and are able to look	6	ask an epidemiologist about that.
7	at the strengths and weaknesses of these	7	BY MR. SMITH:
8	epidemiological studies, how do you	8	Q. I want to know the specific
9	arrive at an opinion about the	9	shortcomings of the Nurses' Health
9 10	arrive at an opinion about the epidemiological studies in general?	10	studies and the other two cohort studies
10 11		10 11	studies and the other two cohort studies that you considered before giving any
10	epidemiological studies in general?	10	studies and the other two cohort studies
10 11	epidemiological studies in general? MR. FROST: Objection to	10 11	studies and the other two cohort studies that you considered before giving any
10 11 12	epidemiological studies in general?  MR. FROST: Objection to form.	10 11 12	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?
10 11 12 13	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I	10 11 12 13	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase
10 11 12 13 14	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I emphasize, I look at the relative	10 11 12 13 14	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?
10 11 12 13 14 15	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I emphasize, I look at the relative risk. I look at whether there's a	10 11 12 13 14 15	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?  MR. FROST: Objection.
10 11 12 13 14 15	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I emphasize, I look at the relative risk. I look at whether there's a dose-response relationship in	10 11 12 13 14 15	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?  MR. FROST: Objection.  THE WITNESS: Again, I did
10 11 12 13 14 15 16 17	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I emphasize, I look at the relative risk. I look at whether there's a dose-response relationship in terms of talc use. And there are	10 11 12 13 14 15 16	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?  MR. FROST: Objection.  THE WITNESS: Again, I did not see specific weaknesses in
10 11 12 13 14 15 16 17	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I emphasize, I look at the relative risk. I look at whether there's a dose-response relationship in terms of talc use. And there are no other conclusions from these studies that I can make other than	10 11 12 13 14 15 16 17	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?  MR. FROST: Objection.  THE WITNESS: Again, I did not see specific weaknesses in those studies.
10 11 12 13 14 15 16 17 18	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I emphasize, I look at the relative risk. I look at whether there's a dose-response relationship in terms of talc use. And there are no other conclusions from these	10 11 12 13 14 15 16 17 18	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?  MR. FROST: Objection.  THE WITNESS: Again, I did not see specific weaknesses in those studies.  BY MR. SMITH:
10 11 12 13 14 15 16 17 18 19 20	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I emphasize, I look at the relative risk. I look at whether there's a dose-response relationship in terms of talc use. And there are no other conclusions from these studies that I can make other than talcum powder does not pose a risk that's significant in the	10 11 12 13 14 15 16 17 18 19 20	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?  MR. FROST: Objection.  THE WITNESS: Again, I did not see specific weaknesses in those studies.  BY MR. SMITH:  Q. Okay. Can talc be safely
10 11 12 13 14 15 16 17 18 19 20 21	epidemiological studies in general?  MR. FROST: Objection to form.  THE WITNESS: As I emphasize, I look at the relative risk. I look at whether there's a dose-response relationship in terms of talc use. And there are no other conclusions from these studies that I can make other than talcum powder does not pose a risk	10 11 12 13 14 15 16 17 18 19 20 21	studies and the other two cohort studies that you considered before giving any weight to those studies for your opinion that talc does not significantly increase the risk of ovarian cancer?  MR. FROST: Objection.  THE WITNESS: Again, I did not see specific weaknesses in those studies.  BY MR. SMITH:  Q. Okay. Can talc be safely absorbed in a woman's vagina?

	Page 158		Page 160
1	we on?	1	bottom right there's a Bates number. It
2	MR. SMITH: 18.	2	says J&J, and it's got some numbers. And
3	(Document marked for	3	that's just to indicate that they
4	identification as Exhibit	4	produced this to me.
5	Mossman-18.)	5	And what this document is,
6	BY MR. SMITH:	6	Doctor, it's about a cornstarch
7	Q. Have you ever seen any	7	substitute that they were looking at in
8	internal documents of the defendants, of	8	testing. And I want to go to the last
9	Johnson & Johnson, Imerys, Luzenac?	9	page. It's called it's called a Dry Flo
10	A. I have not.	10	product. And in the second paragraph,
11	Q. Have you asked to see any of	11	"Since the meeting, Ashton
12	them?	12	established" and he is an employee of
13	A. No.	13	Johnson & Johnson "the largest
14	Q. Would you like to have seen	14	commercial use of Dry-Flo are in vitamin
15	any of them?	15	
16	A. I wouldn't know what to ask	16	A manufacturer (5 percent in finished
17	for.	17	product) and as a condom lubricant where
18			it had replaced talc because it was found
	Q. Well, if they're scientific	18	to be safely absorbed in the vagina,
19	and otherwise documents from the	19	whereas of course talc was not."
20	company that you're defending from	20	Do you have an opinion
21	scientists from the company, would you	21	whether talc can be safely absorbed in a
22	have liked to have seen those?	22	woman's vagina?
23	MR. FROST: Objection to	23	MR. FROST: Objection to
24	form.	24	form.
	Page 159		Page 161
1	THE WITNESS: Yeah, I can't	1	BY MR. SMITH:
2	think of specific instances.	2	Q. I think you stated earlier.
3	Again, I'm not looking at internal	3	I thought you said that you couldn't see
4	documents to render my opinions.	4	any reason why it couldn't be.
5	I'm looking at the peer-reviewed	5	MR. SMITH: Could we go back
6	literature.	6	to that question?
7	BY MR. SMITH:	7	THE WITNESS: I don't know
8	Q. This is an article	8	what they mean by absorbed safely
9	actually, it's an internal memo from	9	in the vagina. Talc enters and
10	Johnson & Johnson. You see the title	10	other things enter cells. They're
11	is subject is "Cornstarch	11	not absorbed. So I have I'm
12	development." Would you agree with me	12	not sure what the scientific
13	that cornstarch powder, there's no	13	information is here.
14	reported ill effects of cornstarch powder	14	BY MR. SMITH:
15	and ovarian cancer risk?	15	Q. If you believe that talc
16	A. I have not seen that in the	16	could be safely absorbed in a woman's
17	literature. But I have not done a review	17	vagina, you would be in disagreement with
18	of cornstarch through PubMed.	18	Mr. Ashton that wrote this letter on
19	Q. You see, "Cornstarch	19	February 21, 1964, as an employee of
20	development, February 21st, 1964," at the	20	Johnson & Johnson, correct?
21	top.	21	MR. FROST: Objection to
22	Do you see that?	22	form.
23	A. I do.	23	THE WITNESS: Yeah, I have
24	Q. And if you look at the	24	not I can't comment on this,

41 (Pages 158 to 161)

		1	
	Page 162		Page 164
1	because I'm unaware of any studies	1	broadest sense. It would depend
2	with either cornstarch or talc	2	upon the dose, duration from the
3	absorption in the vagina. I don't	3	oxidant stress.
4	know what that means.	4	BY MR. SMITH:
5	BY MR. SMITH:	5	Q. Do you have an opinion on
6	Q. Can talc cause inflammation?	6	whether inhaled particles can reach the
7	MR. FROST: Objection to	7	ovaries?
8	form.	8	A. That has not been shown.
9	THE WITNESS: Again, it	9	So no one has really looked
10	depends upon the circumstances and	10	at that in detail. But the answer is
11	the dose and the site of	11	that most of the information suggests
12	application.	12	that an inhaled particle is dealt with
13	BY MR. SMITH:	13	locally, rather than disseminated.
14	Q. Can talc cause inflammation?	14	Although there's evidence in the
15	MR. FROST: Objection to	15	bloodstream that there is dissemination
16	form.	16	of materials throughout the body.
17	THE WITNESS: Yeah. You'd	17	Q. Have you ever conducted a
18	have to ask me in terms of the	18	study on cosmetic talc and ovarian
19		19	cancer?
20	dose or give me an example. BY MR. SMITH:	20	A. I haven't used cosmetic
21		21	
22	Q. Is talc capable of causing inflammation in human tissue?	22	talc, as I've said previously.
23		23	Q. Have you ever published on
23 24	MR. FROST: Objection to	1	asbestos and ovarian cancer?
24	form.	24	A. No. But I've published
	Page 163		Page 165
1	THE WITNESS: In human	1	studies on asbestos, on ovarian
2	tissue? It's been used in	2	epithelial cells.
3	pleurodesis if that's what you're	3	Q. Have you ever published on
4	talking about, which induces an	4	asbestos and ovarian cancer?
5	acute inflammation that's	5	MR. FROST: Objection to
6	beneficial to patients with	6	form.
7	malignant effusions.	7	THE WITNESS: Yeah, I did
8	BY MR. SMITH:	8	state, and I believe it's in the
9	Q. Can chronic inflammation	9	Shukla and Hillegass paper,
10	lead to ovarian cancer?	10	references on ovarian cancer and
11	MR. FROST: Objection to	11	asbestos.
12	form.	12	BY MR. SMITH:
13	THE WITNESS: There is no	13	Q. Can you turn to the Brower
14	evidence that it's linked to	14	deposition Page 134?
15	causation.	15	A. Mm-hmm.
16	So I can't comment on that.	16	Q. Line 10.
17	It hasn't been shown.	17	"Question: Have you ever
18	BY MR. SMITH:	18	conducted a study on asbestos and ovarian
19		19	cancer?
20	Q. Can oxidative stress lead to ovarian cancer?	20	
21		I	"Answer: No."
21	MR. FROST: Objection to	21 22	Has that changed since
23	form.	I	October of 2000
23 24	THE WITNESS: Yeah, I	23	A. I'm sorry, could you point
<u>. 4</u>	couldn't agree with that in the	24	that out again?
			_

42 (Pages 162 to 165)

	Page 166		Page 168
1	Q. Sure. Line 10, on Page 134.	1	Q. Have you ever conducted a
2	"Question: Have you ever	2	study on EMPs and ovarian cancer?
3	conducted a study on asbestos and ovarian	3	A. Again, I haven't used
4	cancer?"	4	ovarian cancer cells, just ovarian
5	And what was your answer?	5	epithelial cells that develop into
6	A. No. I haven't looked at	6	cancer.
7	ovarian cancer, per se.	7	Q. And EMPs can cause
8	Q. Can I rely on that testimony	8	epigenetic changes in human cells that
9	in Brower as being accurate?	9	may lead to cancer, correct?
10	A. Pardon me?	10	MR. FROST: Objection to
11	Q. Can I rely on the testimony	11	form.
12	in this Brower case that I just read as	12	THE WITNESS: Again, it
13	being accurate?	13	depends on the EMP. That's true
14	A. Yes. I've not looked at	14	for amphibole asbestos fibers.
15	at asbestos and ovarian cancer. I	15	BY MR. SMITH:
16	emphasize that I've looked at asbestos	16	Q. Well, it's true for any
17	effects on ovarian epithelial case.	17	elongated mineral particle, correct?
18	Q. Have you ever given a speech	18	A. What
19	or seminar on talc and ovarian cancer?	19	Q. Not just asbestos?
20	A. No.	20	A. That does what?
21	Q. Have you ever done	21	Q. That cause can give rise to
22	conducted a study on fibrous talc and its	22	epigenetic changes in human cells that
23	carcinogenicity related to ovarian	23	may lead to cancer.
24	cancer?	24	A. No. There are other
	Page 167		Page 169
1	A. You're going to have to be	1	there are materials that we and others
2	specific. When you talk about ovarian	2	have used as negative controls in our
3	cancer studies, are you talking about	3	studies that are fibrous and are EMPs
4	studies on ovarian epithelial cells or	4	that don't give rise to precancerous
5	are you talking about studies on cancer	5	changes.
6	cells?	6	Q. Have you ever conducted a
7	Q. Can you look at Page 136 of	7	study on heavy metals and ovarian cancer?
8	your Brower testimony?	8	A. I haven't.
9	A. Sure.	9	Q. Can you give an opinion on
10	Q. Line 4. "And you've never	10	whether heavy metals contribute to cause
11	conducted a study on fibrous talc and its	11	ovarian cancer?
12	carcinogenicity to ovarian cancer,	12	A. Yes. I have not seen any
13	correct?	13	studies where heavy metals have given
14	"Answer: I have not used	14	rise to ovarian cancers in animals.
15	ovarian cells in studies with fibrous	15	Q. You're saying there are no
16	talcs."	16	studies on heavy metals and ovarian
17	Is that still true today?	17	cancer risk?
18	A. Yes. Fibrous talcs have not	18	A. I
19	been evaluated in ovarian epithelial	19	MR. FROST: Objection to
20	cells.	20	form.
21	Q. Have you ever conducted a	21	THE WITNESS: The I have
22	study on asbestiform talc and ovarian	22	not seen any studies that have
23	cancer?	23	given rise to ovarian cancers.
24	A. No.	24	There are many studies with

43 (Pages 166 to 169)

		1	
	Page 170		Page 172
1	animals using heavy metals at a	1	If they were relevant to
2	variety of high concentrations and	2	ovarian epithelial cells, I would have
3	methods of injection or	3	seen responses to these materials in my
4	inhalation. And these have not	4	studies.
5	given rise to ovarian cancers.	5	Q. But you've never tested
6	BY MR. SMITH:	6	ovarian cells for that?
7	Q. What about, do you have an	7	A. No. But as I emphasize,
8	opinion whether fibrous talc can cause	8	I've got I've gotten the same
9	ovarian cancer?	9	responses in lung epithelial and
10	MR. FROST: Objection to	10	mesothelial cells. So there's different
11	form.	11	cell types that are important.
12	THE WITNESS: Based upon my	12	Again, epithelial cells are
13	research with lung epithelial	13	the cells that give rise to cancers. So
14	cells, I would argue against that	14	ovarian epithelial cells are probably
15	being a true statement.	15	very similar in their responses to lung
16	BY MR. SMITH:	16	epithelial cells.
17	Q. So you are extrapolating	17	Q. Probably? What are you
18	your studies on lung cells to whether	18	basing that on? Probably?
19	fibrous tale can cause ovarian cancer?	19	MR. FROST: Objection.
20	A. I'm not extrapolating. I'm	20	THE WITNESS: Yeah, I'm
21	saying that fibrous talcs as evaluated in	21	basing it on historical studies
22	my studies and in animal studies have not	22	with asbestos fibers that have
23	given rise to ovarian cancers.	23	shown the same pre-neoplastic
24	Q. You would	24	effects in our laboratory, in
2 4	Q. 100 would		one in our mooratory, in
	Page 171		Page 173
1	A. So that would argue against	1	other laboratories that have
2	the connection.	2	looked at a host or a huge range
3	Q. Do you know whether fibrous	3	of different cell types. And the
4	talc or other minerals act differently in	4	basic phenomena, the properties of
5	pleural cells versus ovarian cells or	5	those asbestos fibers are the same
6	peritoneal cells?	6	in terms of their biological
7	MR. FROST: Objection to	7	reactivity in a host of different
8	form.	8	cell types.
9	THE WITNESS: No, they turn	9	BY MR. SMITH:
10	on the same signaling pathways in	10	Q. But you've never done that
11	lung epithelial cells and	11	with ovarian cancer cells, right?
12	mesothelial cells.	12	A. I have
13	BY MR. SMITH:	13	Q. Ovarian cells, excuse me.
14	Q. Do you know whether or not	14	A. Yeah.
15	fiber dimensions, crystalline structures,	15	Q. You have not done that with
16	shape tensile strength of asbestos, have	16	ovarian cells?
17	any relevance to ovarian cancer?	17	A. I have only looked at
18	A. Could we go through these	18	fibrous I should say non-fibrous talc
19	one at a time?	19	in ovarian epithelial cells.
20	Q. Sure.	20	Q. And when we were talking
21	A. So, I would argue that these	21	about fibrous talc earlier, you've never
22	different properties are properties of	22	done any studies on fibrous talc correct?
23	asbestos fibers that have given rise to	23	A. I had done studies on
24	mesotheliomas or lung cancers.	24	fibrous tales.
1	٥	1	

44 (Pages 170 to 173)

	Page 174		Page 176
1	Q. The one study in New York,	1	What do you base that on?
2	correct?	2	A. The fact that Zazenski and
3	A. The study with Dr. Wiley	3	others describe it as cosmetic and
4	where we looked in two different cell	4	pharmaceutical talcs are 98 percent pure
5	types at three different preparations of	5	as opposed to industrial tales from the
6	fibrous tales.	6	mining sites.
7	Q. Is crystalline silica a	7	Q. You're relying on Zazenski,
8	fibrogenic dust that causes oxidative	8	who was an employee of Imerys, who is
9	damage to cells?	9	involved in talc litigation, who
10	A. It does at very high	10	published in the Regulatory Toxicology
11	concentrations.	11	and Pharmacology publication that we
12	Q. Have you ever performed	12	discussed earlier?
13	rodent studies on talc?	13	MR. FROST: Objection to
14	A. I have not.	14	form.
15	Q. You've never performed any	15	THE WITNESS: That's only
16	rodent inhalation studies on talc and its	16	one paper. I believe that this is
17	relation to ovarian cancer; is that true?	17	summarized in IARC 2010. It says
18	A. I have not performed the	18	the exact same thing.
19	studies.	19	BY MR. SMITH:
20	Q. Same for cleavage fragments?	20	Q. Well, hold on. You said you
21	A. I have not used cleavage	21	
22	fragments in rodent inhalation studies.	22	hadn't seen any internal documents.
23	Q. You've not performed studies	23	Where are you seeing the Zazenski stuff?
24	on whether or not asbestos cleavage	24	A. Zazenski is a paper that I
24	on whether of not aspestos cleavage	24	pulled from the literature in a
	Page 175		Page 177
1	fragments cause ovarian cancer, correct?	1	peer-reviewed journal.
2	A. I have not looked at	2	Q. The Regulatory Toxicology
3	cleavage fragments in ovarian epithelial	3	and Pharmacology
4	cells, that's correct.	4	A. Talked about yes.
5	Q. And you do not know whether	5	Q publication?
6	the biodurability of asbestos or talc	6	A. Yes. That's one source.
7	have any relevance to the development of	7	IARC also summarizes the
8	ovarian cancer, correct?	8	properties of tales in its monograph in
9	A. That hasn't been examined	9	several places in the 2010 document. And
10	since we don't know the latency period of	10	has additional references.
11	ovarian cancers to begin with.	11	Q. What is Shower to Shower
12	Q. Do you know what Baby Powder	12	made of?
13	is made of?	13	A. I would have to look at the
14	MR. FROST: Objection to	14	label.
15	form.	15	Q. Do you know?
16	THE WITNESS: Yeah. I I	16	A. I don't.
17	believe it's indicated as such on	17	Q. Do you know what percentage
18	the label.	18	of Baby Powder is tale and what is
19	In general, yes. I'm aware	19	other other constituents?
20	that it has some fragrance	20	A. I don't know the percentage
21	chemicals, but it's also a very	21	values.
	pure type of talc.	22	Q. None of your studies
22	pure type or tale.		,
22 23	BY MR. SMITH:	23	concerned Baby Powder or Shower to
		23 24	concerned Baby Powder or Shower to Shower, correct?

45 (Pages 174 to 177)

	Page 178		Page 180
1	A. I have not used those	1	form.
2	specifically.	2	THE WITNESS: None, to my
3	Q. None of your studies include	3	knowledge.
4	cosmetic-grade talc or talc from any mine	4	BY MR. SMITH:
5	that has been sourced from these two	5	Q. You've never seen the report
6	products, correct?	6	of Dr. Longo?
7	MR. FROST: Objection to	7	A. I'm aware he has one. I
8	form.	8	have not reviewed it for this case.
9	THE WITNESS: Again, I	9	Q. You didn't think it was
10	worked with industrial tales, one	10	important to know what the testing
11	a Barrett mining talc. I don't	11	results were from the '60s, '70s, '80s,
12	know whether it's been sourced for	12	'90s, and 2000s from Johnson & Johnson
13	cosmetic tales.	13	bottles from their own possession from
14	BY MR. SMITH:	14	their own museum regarding the presence
15	Q. Well, you've never worked	15	of asbestos or not?
16	with talc from Vermont, correct,	16	MR. FROST: Objection to
17	cosmetic-grade talc from Vermont?	17	form.
18	A. That's correct.	18	THE WITNESS: Yeah, I had no
19	Q. You've never worked with	19	information suggesting that
20	cosmetic-grade talc from China, correct?	20	asbestos was found in cosmetic
21	A. That's correct.	21	talcs. And I would assume that
22		22	
	Q. You've never worked with	23	Dr. Longo's information is
23	cosmetic-grade talc from Italy, correct?	1	court-related and not in the
24	A. Correct.	24	peer-reviewed scientific
	Page 179		Page 181
1	Q. Okay. You've never	1	literature. So for that reason, I
2	performed any animal inhalation studies	2	wouldn't have looked at it.
3	with Baby Powder or Shower to Shower,	3	BY MR. SMITH:
4	correct?	4	Q. Well, the fact that you have
5	A. That's correct.	5	an opinion that cosmetic-grade talc,
6	Q. And you've never performed	6	which you've never done any studies on,
7	any animal inhalation studies with	7	is not a risk factor or cause of ovarian
8	cosmetic-grade talc or talc from any mine	8	cancer, and those are your opinions in
9	that has been sourced from these two	9	this case as you stated earlier, don't
10	products, correct?	10	you think it would be pretty important to
11	A. That's correct.	11	know if there are any carcinogenic
12	Q. You've never performed any	12	substances that are found in the products
13	work or studies on Johnson & Johnson's	13	that are at issue in this case before
14	Baby Powder or Shower to Shower, correct?	14	rendering that opinion?
15	A. Correct.	15	MR. FROST: Objection to
1	Q. Do you know what the fiber	16	form.
16		1	
16 17		17	THE WITNESS: Again, that's
	or mineral size of these two products are?	1	THE WITNESS: Again, that's why I read the IARC information.
17 18	or mineral size of these two products are?	18	why I read the IARC information,
17 18 19	or mineral size of these two products are?  A. I have not looked at fiber	18 19	why I read the IARC information, and IARC in 2010 says that there
17 18 19 20	or mineral size of these two products are?  A. I have not looked at fiber size dimensions of cosmetic talcs, no.	18 19 20	why I read the IARC information, and IARC in 2010 says that there are no asbestos fibers in cosmetic
17 18 19 20 21	or mineral size of these two products are?  A. I have not looked at fiber size dimensions of cosmetic talcs, no.  Q. What types of asbestos have	18 19 20 21	why I read the IARC information, and IARC in 2010 says that there are no asbestos fibers in cosmetic talcs.
17 18 19 20 21 22	or mineral size of these two products are?  A. I have not looked at fiber size dimensions of cosmetic talcs, no.  Q. What types of asbestos have been found in Johnson & Johnson Baby	18 19 20 21 22	why I read the IARC information, and IARC in 2010 says that there are no asbestos fibers in cosmetic talcs. BY MR. SMITH:
17 18 19 20 21	or mineral size of these two products are?  A. I have not looked at fiber size dimensions of cosmetic talcs, no.  Q. What types of asbestos have	18 19 20 21	why I read the IARC information, and IARC in 2010 says that there are no asbestos fibers in cosmetic talcs.

46 (Pages 178 to 181)

	Page 182		Page 184
1	and Imerys to see the numerous times that	1	A. That there is not a
2	different types of asbestos have been	2	significantly increased risk of ovarian
3	found in their products, in their own	3	cancer that's related to dose dependency
4	internal testing?	4	of talc use in these studies.
5	MR. FROST: Objection to	5	Q. Let's let's get it
6	form.	6	straight.
7	THE WITNESS: No. I	7	So the meta-analyses that
8	wouldn't know what documents to	8	you looked at in forming the basis of
9	even ask for.	9	your opinion that talc does not cause or
10	BY MR. SMITH:	10	is a risk factor for ovarian cancer, you
11	Q. Don't you think it's	11	based in part on also the meta-analyses
12	important again, if you're going to	12	for which you say those meta-analyses
13	render an opinion about and we're	13	state consistently the same thing, that
14	talking about at issue in this case is	14	talc in those studies show that talc
15	cosmetic-grade talc, not industrial,	15	does not cause those studies did not
16	right?	16	show that talc increases the risk of
17	A. Correct.	17	ovarian cancer and that that finding
18	Q. And we're talking about two	18	is statistically significant, correct?
19	products, Baby Powder and Shower to	19	MR. FROST: Objection to
20	Shower, applied to a woman's genital area	20	form.
21	and that causing ovarian cancer, correct?	21	THE WITNESS: We'd have to
22	A. Again, I emphasize that it	22	go back to the papers. I'm aware
23	wouldn't make any difference whether	23	that the meta-analyses that I've
24	there was a small amount of asbestos in	24	looked at may have been for the
	Page 183		Page 185
1	there, in terms of my opinion. Those	1	case-related studies or the
2	talcs were used by individuals, I'm sure,	2	case-control studies. And with
3	in the Women's Health Initiative, the	3	the exception of Penninkilampi,
4	Gonzalez study and the Nurses' Health	4	the meta-analyses that I looked at
5	study used cosmetic talcs, and they		
		5	did not suggest an increase in
6	didn't report an increase in ovarian	5 6	did not suggest an increase in ovarian cancer that was associated
6 7			
6 7 8	didn't report an increase in ovarian cancers.  So in attempting to go back	6 7 8	ovarian cancer that was associated with talc use. BY MR. SMITH:
6 7 8 9	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few	6 7 8 9	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if
6 7 8 9 10	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any	6 7 8 9 10	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower
6 7 8 9 10 11	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.	6 7 8 9 10 11	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you?
6 7 8 9 10 11	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any	6 7 8 9 10 11 12	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't.
6 7 8 9 10 11 12 13	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?	6 7 8 9 10 11 12 13	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are
6 7 8 9 10 11 12 13	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly	6 7 8 9 10 11 12 13 14	ovarian cancer that was associated with talc use.  BY MR. SMITH:  Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you?  A. I don't.  Q. You don't know if there are EMPs in cosmetic-grade talc, do you?
6 7 8 9 10 11 12 13 14	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms	6 7 8 9 10 11 12 13 14 15	ovarian cancer that was associated with talc use.  BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't.
6 7 8 9 10 11 12 13 14 15	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms of the epidemiology.	6 7 8 9 10 11 12 13 14 15	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't. Q. Do you know if scientists
6 7 8 9 10 11 12 13 14 15 16	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms of the epidemiology.  Q. What did the meta-analyses	6 7 8 9 10 11 12 13 14 15 16 17	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't. Q. Do you know if scientists have found EMPs in Baby Powder or Shower
6 7 8 9 10 11 12 13 14 15 16 17	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms of the epidemiology.  Q. What did the meta-analyses of talc and ovarian cancer risk reveal?	6 7 8 9 10 11 12 13 14 15 16 17	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't. Q. Do you know if scientists have found EMPs in Baby Powder or Shower to Shower?
6 7 8 9 10 11 12 13 14 15 16 17 18	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms of the epidemiology.  Q. What did the meta-analyses of talc and ovarian cancer risk reveal?  A. The meta-analyses with the	6 7 8 9 10 11 12 13 14 15 16 17 18	ovarian cancer that was associated with talc use.  BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't. Q. Do you know if scientists have found EMPs in Baby Powder or Shower to Shower? MR. FROST: Objection to
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms of the epidemiology.  Q. What did the meta-analyses of talc and ovarian cancer risk reveal?  A. The meta-analyses with the exception of, I believe it's	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	ovarian cancer that was associated with talc use.  BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't. Q. Do you know if scientists have found EMPs in Baby Powder or Shower to Shower? MR. FROST: Objection to form.
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms of the epidemiology.  Q. What did the meta-analyses of talc and ovarian cancer risk reveal?  A. The meta-analyses with the exception of, I believe it's Penninkilampi who eliminated one of the	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't. Q. Do you know if scientists have found EMPs in Baby Powder or Shower to Shower? MR. FROST: Objection to form. THE WITNESS: Yeah, I
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms of the epidemiology.  Q. What did the meta-analyses of talc and ovarian cancer risk reveal?  A. The meta-analyses with the exception of, I believe it's Penninkilampi who eliminated one of the more recent cohort studies, all say the	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't. Q. Do you know if scientists have found EMPs in Baby Powder or Shower to Shower? MR. FROST: Objection to form. THE WITNESS: Yeah, I haven't seen it in the
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	didn't report an increase in ovarian cancers.  So in attempting to go back in time and point out discovery of a few fibers is not conclusive evidence in any regard in terms of my opinions.  Q. You did not look at any meta-analyses in this case, did you?  A. Meta-analyses? I certainly did. I looked at meta-analyses in terms of the epidemiology.  Q. What did the meta-analyses of talc and ovarian cancer risk reveal?  A. The meta-analyses with the exception of, I believe it's Penninkilampi who eliminated one of the	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	ovarian cancer that was associated with talc use. BY MR. SMITH: Q. Okay. You do not know if there are EMPs in Baby Powder or Shower to Shower, do you? A. I don't. Q. You don't know if there are EMPs in cosmetic-grade talc, do you? A. I don't. Q. Do you know if scientists have found EMPs in Baby Powder or Shower to Shower? MR. FROST: Objection to form. THE WITNESS: Yeah, I

	Page 186		Page 188
1	BY MR. SMITH:	1	Q. Would you have liked to have
2	Q. You can't tell me whether or	2	known that or seen that when you were
3	not there's asbestiform talc in Baby	3	reviewing the study?
4	Powder or Shower to Shower, correct?	4	MR. FROST: Objection to
5	MR. FROST: Objection to	5	form.
6	form.	6	THE WITNESS: Well, my
7	THE WITNESS: Again, it	7	probably not. Because I know that
8	hasn't been indicated as such	8	talc and fiber identification and
9	and or published in the	9	the methods used have become
10	peer-reviewed scientific	10	increasingly more significant in
11	literature.	11	terms of newer approaches. So I
12	BY MR. SMITH:	12	wouldn't have been interested in
13	Q. And again, you have not	13	her work, which I believe was 40
14	looked at the reports of Dr. Longo or	14	or 50 years ago and had
15	Rigler.	15	questionable use of the
16	Have you seen the the	16	appropriate techniques.
17	publication of Dr. Blount?	17	BY MR. SMITH:
18	A. I have the is this a	18	Q. Okay. You are aware that
19	publication of many years ago, 40 years	19	you are not an expert in testing for
20	ago?	20	asbestos, are you, the presence of
21	Q. It's in the 1990s.	21	asbestos?
22	A. I did look at that at one	22	A. I'm not.
23	point, yes.	23	Q. Did you understand that the
24	Q. Okay. What did it what	24	Blount method is a recognized method for
	Q. Ghay. What are 10 What		Blount method is a recognized method for
	Page 187		Page 189
			rage 107
1	did it say?	1	testing for asbestos in in certain
2	A. It was confusing in terms of	2	testing for asbestos in in certain products?
2	A. It was confusing in terms of her use of the nomenclature of talc,	2 3	testing for asbestos in in certain products?  MR. FROST: Objection to
2 3 4	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes	2 3 4	testing for asbestos in in certain products?  MR. FROST: Objection to form.
2 3 4 5	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was	2 3 4 5	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I
2 3 4 5 6	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.	2 3 4 5 6	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a
2 3 4 5 6 7	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether	2 3 4 5 6 7	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to
2 3 4 5 6 7 8	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there	2 3 4 5 6 7 8	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I
2 3 4 5 6 7 8	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson &	2 3 4 5 6 7 8	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has
2 3 4 5 6 7 8 9	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower	2 3 4 5 6 7 8 9	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.
2 3 4 5 6 7 8 9 10 11	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?	2 3 4 5 6 7 8 9 10	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she
2 3 4 5 6 7 8 9 10 11 12	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such
2 3 4 5 6 7 8 9 10 11 12 13	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.	2 3 4 5 6 7 8 9 10 11 12 13	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction,
2 3 4 5 6 7 8 9 10 11 12 13 14	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't	2 3 4 5 6 7 8 9 10 11 12 13	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today,
2 3 4 5 6 7 8 9 10 11 12 13 14	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified	2 3 4 5 6 7 8 9 10 11 12 13 14 15	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:  Q. Do you know if Dr. Longo and
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.  BY MR. SMITH:  Q. Okay. Have you ever seen	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:  Q. Do you know if Dr. Longo and Dr. Rigler did that on the products that
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.  BY MR. SMITH:  Q. Okay. Have you ever seen any other testimony or asked for any	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:  Q. Do you know if Dr. Longo and Dr. Rigler did that on the products that were provided them by Johnson & Johnson?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.  BY MR. SMITH:  Q. Okay. Have you ever seen any other testimony or asked for any other testimony or been shown any	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:  Q. Do you know if Dr. Longo and Dr. Rigler did that on the products that were provided them by Johnson & Johnson?  MR. FROST: Objection to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.  BY MR. SMITH:  Q. Okay. Have you ever seen any other testimony or asked for any other testimony or been shown any testimony that reveals what the source of	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:  Q. Do you know if Dr. Longo and Dr. Rigler did that on the products that were provided them by Johnson & Johnson?  MR. FROST: Objection to form.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.  BY MR. SMITH:  Q. Okay. Have you ever seen any other testimony or asked for any other testimony or been shown any testimony that reveals what the source of her study was, that being talc?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:  Q. Do you know if Dr. Longo and Dr. Rigler did that on the products that were provided them by Johnson & Johnson?  MR. FROST: Objection to form.  THE WITNESS: I don't know.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.  BY MR. SMITH:  Q. Okay. Have you ever seen any other testimony or asked for any other testimony or been shown any testimony that reveals what the source of her study was, that being talc?  A. I yeah, I don't recall.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:  Q. Do you know if Dr. Longo and Dr. Rigler did that on the products that were provided them by Johnson & Johnson?  MR. FROST: Objection to form.  THE WITNESS: I don't know.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. It was confusing in terms of her use of the nomenclature of talc, which she referred to as sometimes acicular, other types fibrous. It was difficult to interpret that paper.  Q. So, you don't know whether or not they talked about whether there was asbestiform in found in Johnson & Johnson's Baby Powder or Shower to Shower products?  MR. FROST: Objection to form.  THE WITNESS: Yeah, I don't recall that this paper identified the products that she examined.  BY MR. SMITH:  Q. Okay. Have you ever seen any other testimony or asked for any other testimony or been shown any testimony that reveals what the source of her study was, that being talc?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	testing for asbestos in in certain products?  MR. FROST: Objection to form.  THE WITNESS: Again, I emphasize that she used a concentration method to concentrate materials and I believe that is accepted, but has been questioned by scientists.  I am quite certain that she didn't use other approaches such as zonal access x-ray diffraction, which is state of the art today, for fiber identification.  BY MR. SMITH:  Q. Do you know if Dr. Longo and Dr. Rigler did that on the products that were provided them by Johnson & Johnson?  MR. FROST: Objection to form.  THE WITNESS: I don't know.

48 (Pages 186 to 189)

	Page 190		Page 192
1	expert in identifying asbestos in	1	document before, Doctor?
2	materials, right?	2	A. I have.
3	A. I don't look at air samples	3	Q. And this is on asbestos,
4	or lung digests for asbestos fibers.	4	chrysotile, amosite, crocidolite,
5	Q. Or or evaluate, for	5	tremolite, actinolite, and anthophyllite,
6	instance, Baby Powder or Shower to Shower	6	and this is the IARC monograph, right?
7	to determine whether asbestos, heavy	7	A. Yes.
8	metal, silica, were present, correct?	8	Q. And if you flip to Page 253,
9	A. I don't do that. I'm a	9	it's Page 35 of 92 down at the bottom.
10	biologist.	10	If you look at the very bottom of the
11	Q. Do you know whether or not	11	page, Doctor. It discusses cancer of the
12	there are carcinogenic heavy metals in	12	ovary.
13	Baby Powder and Shower to Shower?	13	A. 35 of 92?
14	A. Again, the carcinogens that	14	Q. Yes, ma'am.
15	had been listed by Dr. Selikoff in her	15	A. Okay.
16	report have not given rise in	16	Q. Do you see that?
17	epidemiology or animal studies to ovarian	17	A. Yes.
18	cancers.	18	Q. And then it goes on, on
19	Q. Do you know whether or not	19	Page 76 of 92, for the evaluation. It's
20	there is carcinogenic crystalline silica	20	near the end. It states, "There is
21	in Baby Powder or Shower to Shower?	21	sufficient evidence in humans for the
22	A. I don't.	22	carcinogenicity of all forms of asbestos,
23	Q. We talked about the	23	chrysotile, crocidolite, amosite,
24	different types of asbestos earlier. Do	24	tremolite, actinolite, and
	different types of assessos carnot. Bo		
	Page 191		Page 193
			5
1	you recall that?	1	anthophyllite."
2	A. I do.	2	anthophyllite." A. Could you point
	A. I do. Q. And we were I was asking		anthophyllite." A. Could you point MR. FROST: I was going to
2 3 4	A. I do. Q. And we were I was asking you whether or not you thought that all	2	anthophyllite."  A. Could you point  MR. FROST: I was going to say, where are you reading from?
2 3 4 5	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to	2 3 4 5	anthophyllite."  A. Could you point  MR. FROST: I was going to say, where are you reading from?  THE WITNESS: Yeah.
2 3 4 5 6	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that?	2 3 4 5 6	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I
2 3 4 5	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do.	2 3 4 5	anthophyllite."  A. Could you point  MR. FROST: I was going to say, where are you reading from?  THE WITNESS: Yeah.
2 3 4 5 6 7 8	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and	2 3 4 5 6 7 8	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't
2 3 4 5 6 7 8 9	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of	2 3 4 5 6 7 8	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.
2 3 4 5 6 7 8 9	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens,	2 3 4 5 6 7 8 9	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it. BY MR. SMITH:
2 3 4 5 6 7 8 9 10	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?	2 3 4 5 6 7 8 9 10 11	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the
2 3 4 5 6 7 8 9 10 11 12	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom
2 3 4 5 6 7 8 9 10 11 12 13	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form.	2 3 4 5 6 7 8 9 10 11 12 13	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under
2 3 4 5 6 7 8 9 10 11 12 13 14	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form. THE WITNESS: That is stated	2 3 4 5 6 7 8 9 10 11 12 13 14	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation?
2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: That is stated in terms of their regulatory	2 3 4 5 6 7 8 9 10 11 12 13 14 15	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: That is stated in terms of their regulatory policies, yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form. THE WITNESS: That is stated in terms of their regulatory policies, yes. BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation. THE WITNESS: 76.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct? MR. FROST: Objection to form. THE WITNESS: That is stated in terms of their regulatory policies, yes. BY MR. SMITH: Q. I will attach, the next	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation. THE WITNESS: 76. MR. SMITH: It's under
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form. THE WITNESS: That is stated in terms of their regulatory policies, yes. BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation. THE WITNESS: 76. MR. SMITH: It's under evaluation.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: That is stated in terms of their regulatory policies, yes.  BY MR. SMITH: Q. I will attach, the next numbered exhibit is 19. (Document marked for	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation. THE WITNESS: 76. MR. SMITH: It's under evaluation. THE WITNESS: Okay.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form. THE WITNESS: That is stated in terms of their regulatory policies, yes. BY MR. SMITH: Q. I will attach, the next numbered exhibit is 19. (Document marked for identification as Exhibit	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation. THE WITNESS: 76. MR. SMITH: It's under evaluation. THE WITNESS: Okay. MR. FROST: Now we are on
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: That is stated in terms of their regulatory policies, yes. BY MR. SMITH: Q. I will attach, the next numbered exhibit is 19.  (Document marked for identification as Exhibit Mossman-19.)	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation. THE WITNESS: 76. MR. SMITH: It's under evaluation. THE WITNESS: Okay. MR. FROST: Now we are on the same page.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct? MR. FROST: Objection to form. THE WITNESS: That is stated in terms of their regulatory policies, yes. BY MR. SMITH: Q. I will attach, the next numbered exhibit is 19. (Document marked for identification as Exhibit Mossman-19.) BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation. THE WITNESS: 76. MR. SMITH: It's under evaluation. THE WITNESS: Okay. MR. FROST: Now we are on the same page. BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I do. Q. And we were I was asking you whether or not you thought that all types of asbestos were carcinogenic to humans. Do you recall that? A. I do. Q. And we discussed the NTP and IARC have determined that all forms of asbestos are known human carcinogens, correct?  MR. FROST: Objection to form.  THE WITNESS: That is stated in terms of their regulatory policies, yes. BY MR. SMITH: Q. I will attach, the next numbered exhibit is 19.  (Document marked for identification as Exhibit Mossman-19.)	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	anthophyllite."  A. Could you point MR. FROST: I was going to say, where are you reading from? THE WITNESS: Yeah. MR. SMITH: I'm sorry. I might not have said it. I might have been thinking it and didn't say it.  BY MR. SMITH: Q. Page 76 of 92, down at the bottom MR. FROST: Oh, under evaluation? MR. SMITH: Yeah, under evaluation. THE WITNESS: 76. MR. SMITH: It's under evaluation. THE WITNESS: Okay. MR. FROST: Now we are on the same page.

49 (Pages 190 to 193)

	Page 194		Page 196
1	"There is sufficient evidence of" "in	1	bulletin, right, of Bulletin 62 of NIOSH?
2	humans for the carcinogenicity of all	2	A. I did.
3	forms of asbestos. Asbestos causes	3	Q. And you weren't aware that
4	mesothelioma and cancer of the lung,	4	Dr that Dr. Michaels served on that
5	larynx, and ovary."	5	as well, with you? You weren't aware of
6	Do you see that?	6	that, right?
7	A. Yes.	7	A. He wasn't on the committee
8	Q. And that's what we were	8	meetings that I attended. So I'm not
9	talking about earlier when I was talking	9	sure what where he was. He may have
10	about IARC?	10	been someone that okay, he may have
11	A. Yes.	11	been someone that == okay, he may have
12	Q. And then it says at the	12	capacity. I just don't recall it.
13	bottom, "All forms of asbestos,	13	(Document marked for
14	chrysotile, crocidolite, amosite,	14	identification as Exhibit
15	tremolite, actinolite, and anthophyllite,	15	Mossman-20.)
16	are carcinogenic to humans Group 1."	16	BY MR. SMITH:
17	Do you see that?	17	Q. I'm going to attach as
18	A. I do.	18	
19	Q. Is that what we were	19	Exhibit 20. This is current intelligence Bulletin 62, "Asbestos fibers and other
20	•	20	
21	discussing earlier?  A. Yes.	21	elongated mineral particles, state of the
22	11. 100.	22	science and roadmap for research."
23	Q. We talked about earlier that talc with asbestiform fibers is also a	23	And this was put out by the
			Department of Health and Human Services
24	known human carcinogen as well by IARC;	24	and NIOSH, correct?
	Page 195		Page 197
1	is that correct?	1	A. Yes.
2	A. They classify it as such.	2	Q. And NIOSH is the scientific
3	Q. And we went through also the	3	arm of OSHA; is that correct?
4	Prop 65 listing. Do you recall that for	4	A. Yes, it is.
5	asbestiform talc?	5	Q. Responsible for health and
6	A. Yes. I'm not sure what that	6	safety of American workers; is that
7	said exactly, but I don't think we	7	correct?
8	discussed that.	8	A. That's OSHA. NIOSH is more
9	Q. Well, let's discuss it. It	9	a research body.
10	says, "Talc containing asbestiform	10	Q. And if you look at XVII.
11	fibers." It's Exhibit 15.	11	It's in the front page. I guess that
12	It says, "Chemical listing	12	would be 17.
13	details." And it says, "Listed as	13	A. Okay.
14	causing," and it says "cancer."	14	Q. It says do you see
15	Do you see that? And date	15	"acknowledgments" at the top? Down at
16	of listing was on 4/1/1990?	16	the bottom right corner, Doctor?
17	A. Yes.	17	A. Yes.
18	Q. Okay. And do you remember	18	Q. XVII. It says peer
19	us talking earlier, I asked you about if	19	reviewers. Do you see that?
20	you knew David Michaels, if he was and	20	It says, "NIOSH greatly
21	we went through his book, his chapter in	21	appreciates the time and efforts of
22	the book on Regulatory Toxicology and	22	expert peer reviewers who provided
23	Pharmacology. And I asked you, you	23	comments and suggestions on the initial
24	served as a peer reviewer of this	24	publicly disseminated draft of the
27	r		

1	Page 198		Page 200
1	roadmap February 7, 2007, version."	1	internally by Johnson & Johnson, Imerys
2	Do you see that?	2	internally, or by Dr. Longo?
3	A. Yes, I do.	3	A. I don't.
4	Q. And do you see David	4	Q. If I told you they were
5	Michaels, Ph.D. MPH, George Washington	5	tremolite, anthophyllite, and actinolite,
6	University listed on that page?	6	the majority of what was found, the vast
7	A. I do.	7	majority, you wouldn't have any basis or
8	Q. And then on the next page	8	any knowledge regarding that, right?
9	you are listed on the top, correct?	9	MR. FROST: Objection to
10	A. Mm-hmm.	10	form.
11	Q. Okay. If we go to let's	11	THE WITNESS: Yeah, could
12	see. If you look at Page 33, Doctor. If	12	
13		13	you repeat that again. BY MR. SMITH:
	you look at the bottom right in the		
14	footnote, if you go two, four, six six	14	Q. Tremolite, anthophyllite,
15	lines down. It says, "The National	15	and actinolite.
16	Toxicology Program, NTP, 2005, of which	16	A. And the
17	NIOSH is a member, has determined that	17	MR. FROST: Objection to
18	asbestos in all commercial forms of	18	form.
19	asbestos are known to be human	19	THE WITNESS: Are you
20	carcinogens based on sufficient evidence	20	yeah, are you saying that the
21	of carcinogenicity in humans."	21	asbestos varieties of these have
22	Do you see that?	22	been found in Baby Powder?
23	MR. FROST: Want me to help	23	BY MR. SMITH:
24	you?	24	Q. Yes, ma'am.
	Page 199		Page 201
1	THE WITNESS: Yeah, that	1	MR. FROST: Objection to
2	would be great.	2	form.
3	MR. FROST: Do you mind if I	3	THE WITNESS: Okay.
4	point to where you were?	4	BY MR. SMITH:
5	MR. SMITH: Oh, yeah. No,	5	Q. And you haven't seen the
6	no, no.	6	internal documents of Johnson & Johnson
7	THE WITNESS: I'm just	7	regarding this matter, have you?
,		1 -	
8	I III looking at uits. Okay.	8	A. I haven't.
	I'm looking at this. Okay. BY MR. SMITH:	8 9	
8	BY MR. SMITH:	1	<ul><li>A. I haven't.</li><li>Q. And you haven't seen the</li></ul>
8 9		9	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac,
8 9 10	BY MR. SMITH: Q. Do you see that, Doctor, in	9 10	<ul><li>A. I haven't.</li><li>Q. And you haven't seen the</li></ul>
8 9 10 11	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes.	9 10 11	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct.
8 9 10 11 12	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay.	9 10 11 12	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the
8 9 10 11 12 13 14	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was	9 10 11 12 13	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct?
8 9 10 11 12 13 14 15	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.)	9 10 11 12 13 14	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the
8 9 10 11 12 13 14 15	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.) BY MR. SMITH:	9 10 11 12 13 14 15 16	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct? A. Correct. MR. SMITH: What is the
8 9 10 11 12 13 14 15 16 17	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.) BY MR. SMITH: Q. All right, Doctor, different	9 10 11 12 13 14 15 16 17	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct? A. Correct. MR. SMITH: What is the geologist's name?
8 9 10 11 12 13 14 15 16 17	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.) BY MR. SMITH: Q. All right, Doctor, different types of asbestos vary in potency as	9 10 11 12 13 14 15 16 17	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct? A. Correct. MR. SMITH: What is the geologist's name? BY MR. SMITH:
8 9 10 11 12 13 14 15 16 17 18	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.) BY MR. SMITH: Q. All right, Doctor, different types of asbestos vary in potency as carcinogens; however, they're all	9 10 11 12 13 14 15 16 17 18 19	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct? A. Correct. MR. SMITH: What is the geologist's name? BY MR. SMITH: Q. And you haven't seen the
8 9 10 11 12 13 14 15 16 17 18 19 20	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.) BY MR. SMITH: Q. All right, Doctor, different types of asbestos vary in potency as carcinogens; however, they're all recognized as carcinogens, right?	9 10 11 12 13 14 15 16 17 18 19 20	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct? A. Correct. MR. SMITH: What is the geologist's name? BY MR. SMITH: Q. And you haven't seen the geologist expert Cook, Dr. Cook in this
8 9 10 11 12 13 14 15 16 17 18 19 20 21	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.) BY MR. SMITH: Q. All right, Doctor, different types of asbestos vary in potency as carcinogens; however, they're all recognized as carcinogens, right? A. Yes. In animals, yes.	9 10 11 12 13 14 15 16 17 18 19 20 21	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct? A. Correct. MR. SMITH: What is the geologist's name? BY MR. SMITH: Q. And you haven't seen the geologist expert Cook, Dr. Cook in this case, you haven't seen his report, have
8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.) BY MR. SMITH: Q. All right, Doctor, different types of asbestos vary in potency as carcinogens; however, they're all recognized as carcinogens, right? A. Yes. In animals, yes. Q. And I asked you this	9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct? A. Correct. MR. SMITH: What is the geologist's name? BY MR. SMITH: Q. And you haven't seen the geologist expert Cook, Dr. Cook in this case, you haven't seen his report, have you?
8 9 10 11 12 13 14 15 16 17 18 19 20 21	BY MR. SMITH: Q. Do you see that, Doctor, in the footnote? A. Yes. Q. Okay. (Whereupon, a discussion was held off the stenographic record.) BY MR. SMITH: Q. All right, Doctor, different types of asbestos vary in potency as carcinogens; however, they're all recognized as carcinogens, right? A. Yes. In animals, yes.	9 10 11 12 13 14 15 16 17 18 19 20 21	A. I haven't. Q. And you haven't seen the internal documents of Imerys or Luzenac, have you, on this? A. That's correct. Q. And you have not seen the reports of Dr. Longo and Rigler, correct? A. Correct. MR. SMITH: What is the geologist's name? BY MR. SMITH: Q. And you haven't seen the geologist expert Cook, Dr. Cook in this case, you haven't seen his report, have

51 (Pages 198 to 201)

	D 000		
	Page 202		Page 204
1	specifically.	1	Q. Yours did too?
2	Q. Okay. Have you we'll get	2	A. Yeah.
3	back to that in a minute.	3	Q. Wasn't a very good job of
4	Your personal research has	4	binding that, was it?
5	not dealt with tremolite asbestos,	5	Bear with me just a second.
6	correct?	6	And to your knowledge there are no
7	A. No. I've only looked at	7	detailed studies comparing the chemistry
8	tremolite in its non-asbestos form.	8	of tremolite asbestos to tremolite
9	Q. Your personal research has	9	cleavage fragments, correct?
10	not dealt with tremolite asbestos,	10	A. That would be a question
11	correct?	11	that should be posed to a geologist. I
12	MR. FROST: Objection to	12	have not looked at the mineralogy
13	form.	13	literature for those comparisons.
14	THE WITNESS: Yeah. I've	14	Q. With regard to anthophyllite
15	looked at tremolite, but not the	15	asbestos and anthophyllite cleavage
16	asbestos. That's correct.	16	fragments, you have not studied the
17	BY MR. SMITH:	17	differences in chemistry between the two,
18	Q. Your personal research has	18	correct?
19	not dealt with anthophyllite asbestos,	19	A. That's correct.
20	correct?	20	Q. And the same with regard to
21	A. I have not used	21	actinolite asbestos and actinolite
22	anthophyllite, that's correct.	22	actinolite assessos and actinolite actinolite cleavage fragments?
23	Q. Your personal research has	23	A. That's correct.
24	not dealt with actinolite asbestos,	24	
21	not dean with actinomic aspestos,	24	Q. And aside from the one study
	Page 203		Page 205
1	correct?	1	in upstate New York on talc, you've never
2	A. That's correct.	2	studied tremolite or anthophyllite
3	Q. You cannot tell me how	3	cleavage fragments yourself, correct?
4	carcinogenic or potent tremolite or	4	A. The study that I performed
5	anthophyllite are, correct?	5	was with Dr. Wiley.
6	MR. FROST: Objection to	6	Q. Aside from the one study in
7	form.	7	upstate New York on talc, you have never
8	THE WITNESS: Again, I can	8	studied tremolite or anthophyllite
9	tell you based on the epidemiology	9	cleavage fragments yourself, have you?
10	that anthophyllite is a weak agent	10	MR. FROST: Objection to
11	in the development of	11	form.
12	mesotheliomas as compared to	12	THE WITNESS: Correct. It's
13	crocidolite or amosite asbestos.	13	just that one study.
14	BY MR. SMITH:	14	BY MR. SMITH:
15	Q. You have never studied the	15	Q. And the talc in your New
16	differences between tremolite asbestos	16	York study that we just discussed was
17	and tremolite cleavage fragments,	17	a an industrial grade talc and not
18	correct?	18	cosmetic-grade tale; is that correct?
19	A. I haven't used the two	19	A. Yes. There were three
20	comparatively in experiments, that's	20	samples of tale with various proportions
21	correct.	21	of fibers.
22	Q. This thing fell apart.	22	Q. You have not studied how
23	That's crazy.	23	tremolite, anthophyllite, and actinolite
24	A. Mine fell apart too.	24	asbestos reached the areas of the lungs
	11. Willie Tell apart too.		accepted feached the areas of the fairgs

		1	
	Page 206		Page 208
1	where meso is induced and developed, and	1	In the it's broken up.
2	you cannot make a strict analogy to these	2	Whatever.
3	types of asbestos from your study of	3	MR. FROST: Mine stayed
4	other types of asbestos; is that correct?	4	together.
5	MR. FROST: Objection to	5	THE WITNESS: Yeah, mine is
6	form.	6	broken, so
7	THE WITNESS: Yeah, I I'd	7	MR. FROST: 179 you said?
8	have to ask someone who is an	8	MR. SMITH: Yes, please.
9	expert in dosimetry. Assuming	9	MR. FROST: Here, do you
10	that dimensions of fibers govern	10	want do you want to switch,
11	where they end up in the lung, the	11	Brooke?
12	results that we have may be	12	THE WITNESS: That's okay.
13	relevant certainly to these types	13	MR. FROST: Mine is still
14	of materials.	14	bound. So do you want to switch?
15	BY MR. SMITH:	15	THE WITNESS: I think I'm
16	Q. Okay. I'm going to ask the	16	prime viewing here.
17	question again. I don't think it was	17	No, just in different
18	responsive.	18	pieces. 179.
19	You have studied you have	19	Okay.
20	not studied how tremolite, anthophyllite,	20	BY MR. SMITH:
21	and actinolite asbestos reached the area	21	Q. All right. On Line 11:
22	in the lungs where meso is induced and	22	"And then you were asked the following
23	developed, correct?	23	question:
24	MR. FROST: Objection to	24	"Okay. Well, I think the
	Page 207		Page 209
1	form.	1	record will speak for itself, but I think
2	THE WITNESS: I yeah, I	2	you did give that in your answer when I
3	have not studied those three	3	asked you. Let me ask you generally.
4	materials in inhalation	4	"This whole set of opinions
5	experiments.	5	regarding how minerals such as asbestos
6	BY MR. SMITH:	6	get to sites where mesothelioma is
7	Q. And you cannot make a strict	7	induced and developed, does that apply to
8	analogy as to these types of asbestos	8	tremolite, actinolite, and
9	from your other study from your study	9	anthophyllite?"
10	of other types of asbestos; is that	10	"And your answer: I don't
11	correct?	11	know. These, again, the animal studies
12	MR. FROST: Objection to	12	have been done with short and long
13	form.	13	amosite asbestos and they have been done
14	THE WITNESS: And and my	14	with crocidolite asbestos. And the
15	comment was that if they are of	15	groups that have done these experiments
16	the same dimensional	16	have not looked at tremolite and
17	characteristics of the materials	17	actinolite or anthophyllite because they
18 19	that I use, namely crocidolite	18	are the least potent types of asbestos.
. 19	asbestos, I could make some	19 20	So I can't make a strict analogy between
		. 70	what's been studied and the asbestos
20	analogies based upon their size	1	
20 21	and fiber characteristics.	21	types that I" "that haven't been
20 21 22	and fiber characteristics. BY MR. SMITH:	21 22	types that I" "that haven't been studied."
20 21	and fiber characteristics.	21	types that I" "that haven't been

53 (Pages 206 to 209)

	Page 210		
1	correct."	1	
2			cleavage fragment as opposed to the
3	Can I rely on that	2	asbestos fiber is beyond the scope of
3 4	testimony?	3	your expertise, correct?"
	A. You you can.	4	And your answer under
5	Q. Okay. You have not studied	5	that under oath at that time was, "I
6	the bio durability of asbestos cleavage	6	do not do the measurements, no.
7	fragments or talc in any human tissue,	7	That's" "that's correct."
8	correct?	8	Is that true?
9	A. I have not looked at tissue	9	A. No, actually, I have done
10	digestion studies, that's correct.	10	the measurements with Dr. Woodworth on
11	Q. You have not performed any	11	preparations of cleavage fragments and
12	studies on whether cleavage fragments can	12	the respective asbestos fiber
13	reach the area of the lung where meso	13	preparations, and that was done in the
14	is mesothelioma is induced and	14	1980s and '90s.
15	develops, correct?	15	Q. So this was just a
16	A. I have not done inhalation	16	misstatement in Leavitt?
17	studies with cleavage fragments.	17	MR. FROST: Objection to
18	Q. And you have not performed	18	form.
19	any studies on whether cleavage fragments	19	THE WITNESS: Yeah, I don't
20	can reach the area of the lung excuse	20	think it was a misstatement. I
21	me, reach the area excuse me. Let me	21	I say, "I don't do the
22	back up. I'm going to get it right here	22	measurements in each experiment.
23	in a second.	23	I have in the past."
24	You have not performed any	24	So that's what I was
21	Tou have not performed any		So that's what I was
	Page 211		Page 213
1	studies on whether talc can reach the	1	referring to. That's in the next
2	area of the ovaries which can lead to	2	six to eight lines on 194.
3	ovarian cancer, correct?	3	BY MR. SMITH:
4	A. I have not studied migration	4	Q. And then you continue on by,
5	of talc.	5	"Now I give it to a someone in our
6	Q. Distinguishing the	6	cell imaging facility," correct?
7	dimensions, the aspect ratio of a	7	A. Right. We have people who
8	cleavage fragment as opposed to an	8	do those measurements.
9	asbestos fiber is beyond the scope of	9	Q. Okay. You've never measured
10	your expertise, correct?	10	the flexibility or tensile strength of
11	A. I have done some work on	11	asbestos or cleavage fragments, correct?
12	dimensional characteristics in the 1980s,	12	A. That's correct. I don't
13	where we compared cleavage fragment	13	measure flexibility.
14	population to asbestos fibers and those	14	Q. Flexibility of asbestos
15	are papers by Woodworth, et al., and	15	fiber within a lung cell causing
16	Hansen, et al., in cancer research.	16	mechanical injury is just a hypothesis,
17	Q. Okay. Can you go to 193 of	17	correct?
18	the Leavitt testimony, please?	18	A. Well well, it
19	A. Okay.	19	MR. FROST: Objection to
20		20	form.
20 21	Q. And it's down on page I	21	
21 22	mean, excuse me, Line 23.	21	THE WITNESS: Yeah, it was
	"Question" and you were		originally hypothesized by someone
	andra d. Il Cimander mark. Alimbia	2 2	mome od Amele za zade z 1 z 1 z 1 z 4 z 1 z 4 z
23	asked, "Simply put, distinguishing the	23	named Archer who looked at plastic
	asked, "Simply put, distinguishing the dimensions, the aspect ratio of the	23 24	named Archer who looked at plastic films and measured the amount of

Page 214  1 free radical generation and 2 flexibility. So I think it's more 3 than a hypothesis. It's been 4 proven by some experimental data. 5 BY MR. SMITH: 5 break now? 1		free radical generation and	1	_
detability. So I think it's more than a hypothesis. It's been proven by some experimental data. BY MR. SMITH: BY MR. SMITH: Co. Go to Page 172 in your A. Okay. Co. And I'm I'm going to poperation benefit of the witness if fine and your fine something. A. It's okay. We're getting A. It's okay. We're getting A. It's okay. We're getting A. It's okay. When" "when asked Co. And I'm in the past A. Okay. When" "when asked A. Okay. When" "when asked A. Okay. When" "when asked A. It's okay. We're getting A. It's okay. We're Boout I fave within A. It's okay. A. We're many own answer A. Okay. We're getting A. My answer was, "Yes." But A. A. It's a hypothesis, correct?"  Page 215  Page 215  Page 217  A. My answer was, "Yes." But A. And your answer was what? A. My answer was, "Yes." But A. A. It's a we're going to have a Boout It's within A. It's we're going to have a Boout A. It's within A. It's we're going to have a Boout A.			1	THE WITNESS W
Section 1   Section 2   Short	2			THE WITNESS: Want to take a
d than a hypothesis. It's been 4 proven by some experimental data. 5 BY MR. SMITH: 15 BY BY ONLY		nexionity. So I tillik it's more	2	
4 proven by some experimental data. 5 BY MR. SMITH: 6 Q. Go to Page 172 in your 6 generally fine going through tunch. I don't normally take lunches, but if the witness if fine and you're fine 10 hopefully maybe get you a better copy or something. 11 A. It's okay. We're getting 12 A. It's okay. We're getting 13 there. 14 Q. All right. 172. Line 15. 15 "Okay. When" "- when asked 15 woo. It's there is a hypothesis that the 17 there is a hypothesis that the 17 the lung within a cell can cause mechanical injury, correct? 19 was, "Yes." 20 "Yeah" - and your answer 21 was, "Yes." 21 And your answer was what? 22 was, "Yes." 23 "Question: Okay. But 23 half an hour, 45 minutes? 24 that's a hypothesis, correct?" 25 A. My answer was, "Yes." But as I just stated, there have been studies 4 showing that flexibility within a cell 5 can cause oxidants that then are associated with a mechanical injury. 3 or bits statement is is correct, but I think my statement in 19 terms of Archer experiments, it also 10 relate to flexibility and things that injure cells. 4 A. Sure. 4 MR. SMITH: Is that okay? 5 THE WITNESS: It it's up to you. It'd just as soon go. 4 MR. SMITH: Well, we're going to have a 4 MS. O'DELL: I think we should have lunch at some point. 4 MR. SMITH: I'm going to have to eat something. 5 THE WITNESS: Okay. 6 MR. FROST: Okay. How long is your next section? Is it like half an hour, 45 minutes? 7 MR. SMITH: That's a good 7 Page 215 7 Page 217 8 WR. SMITH: Shat okay? 8 MR. FROST: You want to break now? 9 MR. FROST: Yeah, that's fine. 9 Green can irely on 12 minute in injure cells. 16 MR. SMITH: Okay. I'm 15 minute in injure cells. 17 MR. SMITH: Is that okay? 18 MR. SMITH: Okay. I'm 16 minute in injure cells. 18 MR. SMITH: Okay. I'm 17 minute in injure cells. 19 MR. SMITH: Okay. I'm 18 minute in injure cells. 19 MR. SMITH: Okay. I'm 19 minute in injure cells. 20 MR. SMITH: The intimute in injure cells. 2	3		3	MR. FROST: Yeah, so why
5 BY MR, SMITH:   5	4		4	don't we take like a five-minute
7 Leavitt testimony. 8 A. Okay. 9 Q. And I'm I'm going to 10 hopefully maybe get you a better copy or 11 something. 12 A. It's okay. We're getting 13 there. 14 Q. All right. 172. Line 15. 15 "Okay. When" "when asked 16 about flexibility you said in the past 16 flexibility of an asbestos fiber within 18 flexibility of an asbestos fiber within 19 the lung within a cell can cause 19 mechanical injury, correct? 20 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?" 24 The WITNESS: Okay. 25 MR. SMITH: That's a good  Page 215  Page 215  Page 217  And your answer was what? 4 showing that flexibility within a cell can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 6 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 MR. SMITH: Okay. I'm 13 getting ready to move to a 14 Gifferent section. Are we 15 Good No. O'DELL: What's your preference though? 14 The WITNESS: It it's up 15 to you. I'd just as soon go. 16 MR. SMITH: Well, we're 27 going to have a 28 MR. SMITH: Well, we're 29 oing to have a 4 MR. SMITH: I'm going to 4 have to eat something. 17 THE WITNESS: Okay. 18 MR. SMITH: That's a good 19 have to eat something. 10 have to eat something. 11 question. I think we probably better	5		5	break and then I mean, I'm
7 Leavitt testimony. 8 A. Okay. 9 Q. And I'm I'm going to 10 hopefully maybe get you a better copy or 11 something. 12 A. It's okay. We're getting 13 there. 14 Q. All right. 172. Line 15. 15 "Okay. When" "when asked 16 about flexibility you said in the past 16 flexibility of an asbestos fiber within 18 flexibility of an asbestos fiber within 19 the lung within a cell can cause 19 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?" 21 And your answer was what? 22 A. My answer was what? 3 as I just stated, there have been studies 4 showing that flexibility within a cell 5 can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 6 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 MR. SMITH: Okay. I'm 18 breaking for lunch, are we just 18 Unnches, but if the witness if fine and your're fine MR. O'DELL: What's up to you. I'd just as soon go. MR. SMITH: Well, we're going to have a MR. SMITH: Well, we're going to have a MR. SMITH: I'm going to have a MR. SMITH: I'm going to have a MR. SMITH: I'm going to have to eat something. THE WITNESS: Okay. MR. FROST: Okay. How long is joyur next section? Is it like half an hour, 45 minutes? MR. FROST: You want to break now? MR. FROST: You want to break now? MR. SMITH: Shat okay? THE WITNESS: Sure. MR. SMITH: Is that okay? THE WITNESS: Sure. MR. FROST: Yeah, that's fine.  THE VIDEOGRAPHER: Going off record. The time is 12:16.   MR. SMITH: Okay. I'm getting ready to move to a different section. Are we 17 different section. Are we 18 breaking for lunch, are we just 18 THE VIDEOGRAPHER: We are	6	Q. Go to Page 172 in your	6	generally fine going through
8 A. Okay. 9 Q. And I'm I'm going to 10 hopefully maybe get you a better copy or 11 something. 12 A. It's okay. We're getting 13 there. 14 Q. All right. 172. Line 15. 15 "Okay. When" "when asked 16 about flexibility you said in the past 16 flexibility of an asbestos fiber within 18 flexibility of an asbestos fiber within 19 the lung within a cell can cause 20 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 23 "Question: Okay. But 24 that's a hypothesis, correct?" 24 The WITNESS: It it's up 25 was, "Yes." 26 was, "Yes." 27 THE WITNESS: It it's up 28 was, "Yes." 29 have a 29 have a 20 have a 21 myeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?" 24 That's a hypothesis, correct?" 25 A. My answer was what? 26 A. My answer was what? 27 And your answer was what? 28 A. My answer was what? 29 A. My answer was what? 20 as I just stated, there have been studies 29 showing that flexibility within a cell 20 can cause oxidants that then are 21 flexibility and things that 22 injure cells. 23 correct, but I think my statement in 24 terms of Archer experiments, it also 25 relate to flexibility and things that 26 injure cells. 27 mR. SMITH: Okay. I'm 28 getting ready to move to a 29 different section. Are we 30 different section. Are we 31 fine. 32 THE WITNESS: Okay. 34 MR. FROST: You want to 35 mR. FROST: You want to 36 mR. SMITH: Yeah. 37 THE WITNESS: Okay. 38 Grant and your answer in Leavitt right there? 39 THE WITNESS: Okay. 30 MR. FROST: Yeah, that's fine. 30 MR. FROST: Yeah, that's fine. 31 THE WITNESS: Okay. 31 THE WITNESS: Okay. 32 mR. FROST: You want to 34 mR. FROST: Yeah, that's fine. 35 mR. FROST: Yeah, that's fine. 36 mR. FROST: Yeah, that's fine. 37 THE WITNESS: Okay. 38 Correct, but I think my statement in 39 terms of Archer experiments, it also 40 mR. FROST: Yeah, that's fine. 41 A. Sure. 42 (Lunch break.) 43 AFTER NOON SESSION 44 (Linch break.) 45 THE WITNESS: Okay. 46 THE WITNESS: Okay. 47 T	7		7	
10   hopefully maybe get you a better copy or something.   12   A. It's okay. We're getting   12   THE WITNESS: It it's up to you. It'd just as soon go.   13   there.   13   to you. It'd just as soon go.   14   Q. All right. 172. Line 15.   14   MR. SMITH: Well, we're going to have a   MS. O'DELL: I think we should flexibility you said in the past there is a hypothesis that the   17   the lung within a cell can cause   19   the lung was, "Yes."   22   was, "Yes."   22   was, "Yes."   23   "Question: Okay. But   23   that's a hypothesis, correct?"   24   MR. SMITH: That's a good   11   That's a good   12   The WITNESS: Okay.   MR. FROST: Okay. How long is your next section? I sit like half an hour, 45 minutes?   24   MR. SMITH: That's a good   25   MR. SMITH: That's a good   27   MR. SMITH: That's a good   28   MR. SMITH: That's a good   28   MR. SMITH: That's a good   28   MR. SMITH: Well, we're going to have a   10   MS. O'DELL: What's view to you. It'g just as soon go.   MR. SMITH: Well, we're going to have a   17   MR. SMITH: Well, we're going to have a   17   MR. SMITH: Well, we're going to have a   17   MR. SMITH: Well, we're going to have a   18   MR. SMITH: Well, we're going to have a   18   MR. SMITH: Well, we're going to have a   18   MR. SMITH: Well, we're going to have a   18   MR. SMITH: Well, we're going to have a   18   MR. SMITH: Well, we're going to have a   19   MR. SMITH: Well, we're going to have a   19   MR. SMITH: Well, we're going to have a   19   MR. SMITH: Well, we're going to have a   19   MR. SMITH: Well, we're going to have a   19   MR. SMITH: Well, we're going to have a   19   MR. SMITH: Well, we're going to have a   19   MR. SMITH: Well, we're going to have a   19   MR. SMITH: Well, we're	8	<u> </u>	8	lunches, but if the witness if
10   hopefully maybe get you a better copy or something.   12   A. It's okay. We're getting there.   13   THE WITINESS: It it's up to you. I'd just as soon go.   14   Q. All right, 172. Line 15.   14   MR. SMITH: Well, we're going to have a   MR. SMITH: I'm going to have to eat something.   THE WITINESS: Okay.   MR. SMITH: I'm going to have to eat something.   THE WITINESS: Okay.   MR. FROST: Okay. How long is your next section? Ist like half an hour, 45 minutes?   MR. SMITH: That's a good   MR. SMITH: Yeah.   THE WITNESS: Okay.   MR. SMITH: Yeah.   THE WITNESS: Okay.   MR. SMITH: Yeah.   THE WITNESS: Okay.   MR. SMITH: Stata okay?   THE WITNESS: Sure.   MR. SMITH: Stata okay?   THE WITNESS: Okay.	9	Q. And I'm I'm going to	9	fine and you're fine
11 something. 12 A. It's okay. We're getting 13 there. 14 Q. All right. 172. Line 15. 15 "Okay. When" "when asked 16 about flexibility you said in the past 16 there is a hypothesis that the 17 the lung within a cell can cause 19 the was, "Yes." 20 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?" 24 A. My answer was what? 25 A. My answer was, "Yes." But 3 as I just stated, there have been studies showing that flexibility within a cell can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in terms of Archer experiments, it also relate to flexibility and things that injure cells. 17 A. Sure. 18 MR. SMITH: Okay. I'm 19 getting ready to move to a different section. Are we breaking for lunch, are we just 18 MR. SMO NR. ELL: I think we should have lunch at some point. 18 MR. SMITH: Well, we're going to hove a fow. MR. SMITH: Well, we're going to have a 18 MR. SMITH: Well, we're going to hove to a different section. Are we breaked a show. I'm the past to you. I'd just as soon go.  MR. SMITH: Well, we're going to hove to a different section. Are we breaked a show. I'm the post of the past to you. I'd just as soon go.  MR. SMITH: Well, we're going to have a 20 MR. SMITH: Pim going to have to ear something.  MR. SMITH: I'm going to have to eat something.  MR. SMITH: I'm going to have to avould have lunch at some point.  MR. SMITH: Pim going to have to avould have lunch at some point.  MR. SMITH: I'm going to have to avould have tunch at some point.  MR. SMITH: Pim going to have a 20 THE WITNESS: Okay.  MR. FROST: Okay. How long is your next section? Is it like half an hour, 45 minutes?  MR. SMITH: That's a good  MR. SMITH: That's a good  Page 215  Page 217  Question. I think we probably better break now.  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. FROST: You want to break	10		10	MS. O'DELL: What's your
there.  14 Q. All right. 172. Line 15.  15 "Okay. When" "when asked 16 about flexibility you said in the past 17 there is a hypothesis that the 18 flexibility of an asbestos fiber within 19 the lung within a cell can cause 20 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?" 24 that's a hypothesis, correct?" 25 A. My answer was what? 26 A. My answer was what? 27 A. My answer was what? 28 A. My answer was what? 29 A. My answer was what? 20 A. My answer was what? 21 A. My answer was what? 22 A. My answer was what? 23 A. My answer was what? 24 Showing that flexibility within a cell associated with a mechanical injury. 25 Can cause oxidants that then are 26 associated with a mechanical injury. 27 So this statement is is 28 correct, but I think my statement in 29 terms of Archer experiments, it also 10 relate to flexibility and things that injure cells. 11 A. Sure. 12 MR. SMITH: Okay. I'm 13 getting ready to move to a different section. Are we breaking for lunch, are we just 18 to you. I'd just as soon go.  MR. SMITH: Well, we're going to have a MS. O'DELL: I think we should have lunch at some point.  MR. SMITH: I'm going to have a MS. O'DELL: I think we should have lunch at some point.  MR. SMITH: I'm going to have a MS. O'DELL: I think we should have lunch at some point.  MR. SMITH: I'm going to have a MS. O'DELL:  MR. SMITH: I'm going to have a MR. SMITH: I'm going to have to a should have lunch at some point.  MR. SMITH: I'm going to have a MR. SMITH: I'm going to have to eat something.  THE WITNESS: Okay.  MR. FROST: You want to break now.  MR. FROST: You want to	11		11	preference though?
there.  13 there.  14 Q. All right. 172. Line 15.  15 "Okay. When" "when asked 16 about flexibility you said in the past 17 there is a hypothesis that the 17 there is a hypothesis that the 18 flexibility of an asbestos fiber within 19 the lung within a cell can cause 19 mechanical injury, correct? 20 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?" 24 THE WITNESS: Okay. 25 MR. FROST: Okay. How long is your next section? Is it like 26 half an hour, 45 minutes? 27 MR. SMITH: That's a good  Page 215  Page 215  Page 217  And your answer was what? 2 A. My answer was, "Yes." But 3 as I just stated, there have been studies 4 showing that flexibility within a cell 5 can cause oxidants that then are 6 associated with a mechanical injury. 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just  18 to you. I'd just as soon go.  MR. SMITH: Well, we're going to have a  MS. SMITH: It hink we should have lunch at some point.  MR. SMITH: I'm going to have to eat something.  THE WITNESS: Okay.  MR. FROST: Okay. How long is your next section? Is it like half an hour, 45 minutes?  MR. SMITH: That's a good  Page 217  Pag	12	A. It's okay. We're getting	12	THE WITNESS: It it's up
14 Q. All right. 172. Line 15. 15 "Okay. When" "when asked 16 about flexibility you said in the past 16 there is a hypothesis that the 17 the lung within a cell can cause 19 the lung within a cell can cause 20 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?" 24 that's a hypothesis, correct?" 25 A. My answer was what? 26 associated with a mechanical injury. 27 So this statement is is 28 correct, but I think my statement in 29 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 A. Sure. 13 MR. SMITH: Well, we're 26 going to have a 36 MS. O'DELL: I think we 36 showlid have lunch at some point. 37 MR. SMITH: I'm going to 38 have to eat something. 38 HE WITNESS: Okay. 39 MR. FROST: Okay. How long 30 is your next section? Is it like 30 half an hour, 45 minutes? 31 MR. SMITH: That's a good 32 MR. FROST: You want to 34 better break now. 35 MR. FROST: You want to 36 break now? 37 MR. SMITH: Yeah. 38 COTTECT, but I think my statement in 39 terms of Archer experiments, it also 30 relate to flexibility and things that 31 injure cells. 32 MR. SMITH: Okay. I'm 33 different section. Are we 34 A. Sure. 45 MR. SMITH: Okay. I'm 46 getting ready to move to a 47 different section. Are we 48 breaking for lunch, are we just 49 breaking for lunch, are we just 40 A. Sure. 41 THE VIDEOGRAPHER: We are	13		13	to you. I'd just as soon go.
15	14	O. All right. 172. Line 15.	14	
16 about flexibility you said in the past 17 there is a hypothesis that the 18 flexibility of an asbestos fiber within 19 the lung within a cell can cause 20 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?"  Page 215  And your answer was what? 2 A. My answer was, "Yes." But 3 as I just stated, there have been studies 4 showing that flexibility within a cell 5 can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 16 different section. Are we 17 THE WITNESS: It have should have lunch at some point. 18 MR. SMITH: I'm going to have to eat something. 19 He WITNESS: Okay. 19 MR. FROST: Okay. How long is your next section? Is it like have loeat something. 11 That WITNESS: Okay. 11 MR. SMITH: That's a good 12 MR. FROST: You want to break now? 13 MR. FROST: You want to break now? 14 MR. SMITH: Is that okay? 15 THE WITNESS: Okay. 16 MR. SMITH: Is that okay? 17 MR. FROST: Yeah, that's 18 THE WITNESS: Sure. 19 MR. FROST: Yeah, that's 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 16 AFTER NOON SESSION 17 HEWIDEOGRAPHER: We are	15	`	15	
there is a hypothesis that the flexibility of an asbestos fiber within flexibility of an asbestos fiber within the lung within a cell can cause mechanical injury, correct?  mechanical injury.  page 215  page 215  page 215  page 215  page 217  And your answer was what?  A. My answer was, "Yes." But showing that flexibility within a cell showing that flexibility within a cell showing that mechanical injury.  so this statement is is correct, but I think my statement in terms of Archer experiments, it also relate to flexibility and things that injure cells.  Q. Is your can I rely on your answer in Leavitt right there?  MR. SMITH: I'm going to have to eat something.  MR. FROST: Okay.  MR. FROST: Okay. How long is your next section? Is it like half an hour, 45 minutes?  MR. SMITH: That's a good  MR. SMITH: That's a good  page 217  page 218  page 217  page 217  page 217  page 217  page 218  page 21			16	
18 flexibility of an asbestos fiber within 19 the lung within a cell can cause 20 mechanical injury, correct? 21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?" 24 That's a hypothesis, correct?" 25 Page 215 26 And your answer was what? 27 A. My answer was what? 28 A. My answer was what? 29 A. My answer was what? 20 And your answer was what? 21 And your answer was what? 22 A. My answer was what? 23 as I just stated, there have been studies 24 showing that flexibility within a cell 25 can cause oxidants that then are 26 associated with a mechanical injury. 27 So this statement is is 28 correct, but I think my statement in 29 terms of Archer experiments, it also 20 The WiTNESS: Okay. 30 MR. FROST: You want to break now. 31 MR. FROST: You want to break now. 32 MR. SMITH: Is that okay? 33 MR. SMITH: Is that okay? 44 Showing that flexibility and things that injure cells. 45 Correct, but I think my statement in 46 getting ready to move to a different section. Are we breaking for lunch, are we just 46 Just MR. SMITH: I'm going to have to eat something. 47 THE WITNESS: Okay. 48 MR. SMITH: That's a good 49 MR. SMITH: That's a good 40 MR. SMITH: That's a good 40 MR. SMITH: That's a good 41 Think we probably better break now. 49 MR. FROST: You want to break now. 40 MR. FROST: You want to break now. 40 MR. SMITH: Yeah. 41 THE WITNESS: Okay. 41 THE WITNESS: Okay. 42 MR. SMITH: Is that okay? 43 MR. SMITH: We are over a sood and things that injure cells. 44 The WITNESS: Okay. 50 MR. FROST: You want to break now. 51 THE WITNESS: Okay. 51 THE WITNESS: Okay. 52 MR. SMITH: Is that okay? 53 MR. SMITH: Is that okay? 54 THE WITNESS: Okay. 55 MR. SMITH: Is that okay? 56 THE WITNESS: Okay. 57 MR. SMITH: Is that okay? 58 THE WITNESS: Okay. 58 MR. SMITH: Is that okay? 59 MR. SMITH: Is that okay? 50 MR. SMITH: Is that okay? 50 THE WITNESS: Okay. 50 MR. SMITH: Is that okay? 50 MR. SMITH: Is that okay? 51 MR. SMITH: Is that okay? 51 MR. SMITH: Is that okay? 52 MR. SMITH: Is that okay?			17	
the lung within a cell can cause mechanical injury, correct?  "Yeah" and your answer 21 MR. FROST: Okay. How long is your next section? Is it like half an hour, 45 minutes?  And your answer was what? 24 MR. SMITH: That's a good  Page 215  And your answer was what? 25 MR. SMITH: That's a good  Page 215  And your answer was what? 26 MR. SMITH: That's a good  Page 217  And your answer was what? 27 MR. FROST: You want to break now? 37 MR. SMITH: Yeah. 38 MR. SMITH: Yeah. 39 MR. SMITH: Within a cell 49 MR. SMITH: Stata okay? 38 Correct, but I think my statement in 39 terms of Archer experiments, it also 40 relate to flexibility and things that 40 relate to flexibility and things that 40 relate to flexibility and things that 41 injure cells. 42 MR. SMITH: Okay. I'm 42 Getting ready to move to a 41 different section. Are we 41 break ing for lunch, are we just 40 mR. SMITH: We are	18	7.5	18	
mechanical injury, correct?    20	19		19	
21 "Yeah" and your answer 22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?"  24 Page 215  25 And your answer was what? 26 A. My answer was, "Yes." But 27 A. My answer was, "Yes." But 28 Showing that flexibility within a cell 29 terms of Archer experiments, it also 20 relate to flexibility and things that injure cells. 21 Impure cells. 22 MR. FROST: Okay. How long is your next section? Is it like half an hour, 45 minutes? 29 MR. SMITH: That's a good  Page 215  Page 217  10 And your answer was what? 21 question. I think we probably better break now. 22 MR. FROST: You want to break now? 23 MR. SMITH: Yeah. 45 Sure. 46 A Sure. 47 MR. SMITH: Is that okay? 48 Correct, but I think my statement in 88 THE WITNESS: Okay. 49 MR. FROST: Yeah, that's fine. 40 In June cells. 41 THE VIDEOGRAPHER: Going off record. The time is 12:16. 41 A. Sure. 42 MR. SMITH: Okay. I'm 15	20	<u> </u>	20	
22 was, "Yes." 23 "Question: Okay. But 24 that's a hypothesis, correct?"  Page 215  Page 215  And your answer was what? 2 A. My answer was, "Yes." But 3 as I just stated, there have been studies 4 showing that flexibility within a cell 5 can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just  Page 217  Page 217  Page 217  Question. I think we probably better break now.  MR. FROST: You want to break now?  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. SMITH: Sthat okay?  THE WITNESS: Sure.  MR. FROST: Yeah, that's  fine.  10 THE VIDEOGRAPHER: Going off record. The time is 12:16.  11 Lunch break.)  12 THE VIDEOGRAPHER: We are	21		21	
23 "Question: Okay. But that's a hypothesis, correct?"  Page 215  Page 217  And your answer was what?  A. My answer was, "Yes." But showing that flexibility within a cell can cause oxidants that then are associated with a mechanical injury.  So this statement is is scorrect, but I think my statement in relate to flexibility and things that injure cells.  Q. Is your can I rely on your answer in Leavitt right there?  A. Sure.  MR. SMITH: That's a good  Page 217  Page 217  Page 217  And your answer was what?  question. I think we probably better break now.  MR. FROST: You want to break now?  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. SMITH: Is that okay?  THE WITNESS: Sure.  MR. FROST: Yeah, that's fine.  THE VIDEOGRAPHER: Going off record. The time is 12:16.  The VIDEOGRAPHER: Going off record. The time is 12:16.  A. Sure.  MR. SMITH: Okay. I'm getting ready to move to a different section. Are we breaking for lunch, are we just  Date of the mid an hour, 45 minutes?  MR. SMITH: That's a good  Aft I fink we probably better break now.  MR. FROST: You want to break now?  MR. SMITH: It shat okay?  THE WITNESS: Sure.  MR. FROST: Yeah, that's fine.  THE VIDEOGRAPHER: Going off record. The time is 12:16.  The VIDEOGRAPHER: Going off record. The time is 12:16.  The VIDEOGRAPHER: We are	22	· ·	22	
Page 215  Page 215  Page 217  And your answer was what?  A. My answer was, "Yes." But  as I just stated, there have been studies 4 showing that flexibility within a cell 5 can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: That's a good  MR. SMITH: That's a good  Page 217  1 question. I think we probably better break now.  MR. FROST: You want to break now?  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. SMITH: Is that okay?  THE WITNESS: Sure.  MR. FROST: Yeah, that's fine.  THE VIDEOGRAPHER: Going off record. The time is 12:16.   Lunch break.)   A F T E R N O O N S E S S I O N  different section. Are we just  THE VIDEOGRAPHER: We are	23		23	
Page 215  And your answer was what?  A. My answer was, "Yes." But  as I just stated, there have been studies  showing that flexibility within a cell  showing that flexibility within a cell  associated with a mechanical injury.  So this statement is is  correct, but I think my statement in  terms of Archer experiments, it also  relate to flexibility and things that  injure cells.  Q. Is your can I rely on  your answer in Leavitt right there?  A. Sure.  MR. SMITH: Is that okay?  THE WITNESS: Okay.  MR. FROST: Yeah, that's  fine.  THE VIDEOGRAPHER: Going off  record. The time is 12:16.  THE VIDEOGRAPHER: Going off  record. The time is 12:16.  AFTERNOON SESSION  different section. Are we  breaking for lunch, are we just  THE VIDEOGRAPHER: We are			24	· ·
1 And your answer was what? 2 A. My answer was, "Yes." But 3 as I just stated, there have been studies 4 showing that flexibility within a cell 5 can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 10 terms of Archer experiments, it also 11 THE VIDEOGRAPHER: Going off 12		,		
A. My answer was, "Yes." But  as I just stated, there have been studies  showing that flexibility within a cell  showing that flexibility within a cell  can cause oxidants that then are  associated with a mechanical injury.  So this statement is is  correct, but I think my statement in  terms of Archer experiments, it also  relate to flexibility and things that  injure cells.  Q. Is your can I rely on  your answer in Leavitt right there?  A. Sure.  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. SMITH: Is that okay?  THE WITNESS: Sure.  MR. FROST: Yeah, that's  fine.  THE VIDEOGRAPHER: Going off  record. The time is 12:16.   A. Sure.  MR. SMITH: Okay. I'm  getting ready to move to a  different section. Are we  breaking for lunch, are we just  THE VIDEOGRAPHER: We are		Page 215		Page 217
A. My answer was, "Yes." But  as I just stated, there have been studies  showing that flexibility within a cell  showing that flexibility within a cell  can cause oxidants that then are  associated with a mechanical injury.  So this statement is is  correct, but I think my statement in  terms of Archer experiments, it also  relate to flexibility and things that  injure cells.  Q. Is your can I rely on  your answer in Leavitt right there?  A. Sure.  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. SMITH: Is that okay?  THE WITNESS: Sure.  MR. FROST: Yeah, that's  fine.  THE VIDEOGRAPHER: Going off  record. The time is 12:16.   A. Sure.  MR. SMITH: Okay. I'm  getting ready to move to a  different section. Are we  breaking for lunch, are we just  break now.  MR. FROST: You want to  break now?  MR. SMITH: Yeah.  THE WITNESS: Okay.  MR. SMITH: Okay.  I the WITNESS: Sure.  MR. SMITH: Okay.  I the WITNESS: Okay.  THE WITNESS: Okay.  MR. SMITH: Is that okay?  THE WITNESS: Okay.  THE WITNESS: Okay.  MR. SMITH: Okay.  I the WITNESS: Okay.  MR. SMITH: Okay.  I the WITNESS: Okay.  MR. SMITH: Okay.  I the WITNESS: Okay.  I the WITNESS: Okay.  MR. SMITH: Okay.  I the WITNESS: Okay.  I the WITNESS: Okay.  MR. SMITH: Okay.  I the WITNESS: Okay.  A F T E R N O O N S E S S I O N   18 breaking for lunch, are we just  THE VIDEOGRAPHER: We are	1	And your answer was what?	1	question. I think we probably
3 as I just stated, there have been studies 4 showing that flexibility within a cell 5 can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Winner Single War. 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 18 MR. FROST: You want to break now?  4 break now?  6 MR. SMITH: Yeah.  7 MR. SMITH: Is that okay?  7 THE WITNESS: Sure.  9 MR. FROST: Yeah, that's  10 fine.  11 THE VIDEOGRAPHER: Going off  12 record. The time is 12:16.  13 14 (Lunch break.)  15 A F T E R N O O N S E S S I O N  17 different section. Are we 17 18 breaking for lunch, are we just 18 THE VIDEOGRAPHER: We are			2	
4 showing that flexibility within a cell 5 can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: WITNESS: Okay. 7 MR. SMITH: Is that okay? 8 THE WITNESS: Sure. 9 MR. FROST: Yeah, that's 10 fine. 11 THE VIDEOGRAPHER: Going off 12 record. The time is 12:16. 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 18 THE VIDEOGRAPHER: We are	3		3	MR. FROST: You want to
5 can cause oxidants that then are 6 associated with a mechanical injury. 7 So this statement is is 8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Yeah. 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 18 MR. SMITH: Yeah. 16 THE WITNESS: Okay. 17 MR. SMITH: Is that okay? 18 THE WITNESS: Sure. 19 MR. SMITH: Is that okay? 18 THE WITNESS: Sure. 19 MR. SMITH: Okay? 10 THE WITNESS: Sure. 11 THE WITNESS: Sure. 11 THE WITNESS: Sure. 12 MR. SMITH: Going off record. The time is 12:16. 13 14 (Lunch break.) 15 A F T E R N O O N S E S S I O N 17 THE WITNESS: Okay. 18 THE WITNESS: Okay. 19 THE WITNESS: Okay. 19 THE WITNESS: Okay. 10 THE WITNESS: Okay. 10 THE WITNESS: Okay. 11 THE WITNESS: Okay. 12 THE WITNESS: Okay. 13 THE WITNESS: Okay. 14 (Lunch break.) 15 A F T E R N O O N S E S S I O N 17 THE WITNESS: Okay. 18 THE WITNESS: Okay. 19 THE WITNESS: Okay. 10 TH			4	break now?
associated with a mechanical injury. So this statement is is correct, but I think my statement in terms of Archer experiments, it also relate to flexibility and things that injure cells.  Q. Is your can I rely on Q. Is your answer in Leavitt right there? A. Sure.  MR. SMITH: Is that okay? THE WITNESS: Sure. MR. FROST: Yeah, that's fine.  THE VIDEOGRAPHER: Going off record. The time is 12:16.   Lunch break.)   MR. SMITH: Okay. I'm getting ready to move to a different section. Are we breaking for lunch, are we just  THE WITNESS: Okay.  MR. SMITH: Is that okay?  THE WITNESS: Okay.  AR. FROST: Yeah, that's  fine.  11  THE VIDEOGRAPHER: We are	5		5	MR. SMITH: Yeah.
7 So this statement is is 7 MR. SMITH: Is that okay? 8 correct, but I think my statement in 9 terms of Archer experiments, it also 9 MR. FROST: Yeah, that's 10 relate to flexibility and things that 10 fine. 11 injure cells. 11 THE VIDEOGRAPHER: Going off 12 Q. Is your can I rely on 12 record. The time is 12:16. 13 your answer in Leavitt right there? 13 14 A. Sure. 14 (Lunch break.) 15 MR. SMITH: Okay. I'm 15 AFTERNOON SESSION 17 different section. Are we 17 18 breaking for lunch, are we just 18 THE VIDEOGRAPHER: We are			6	THE WITNESS: Okay.
8 correct, but I think my statement in 9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just  18 THE WITNESS: Sure. 19 MR. FROST: Yeah, that's 10 fine. 11 THE VIDEOGRAPHER: Going off record. The time is 12:16. 12 (Lunch break.) 13 14 AFTERNOON SESSION 15 AFTERNOON SESSION 17 THE VIDEOGRAPHER: We are			7	· · · · · · · · · · · · · · · · · · ·
9 terms of Archer experiments, it also 10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 10 MR. FROST: Yeah, that's fine. 11 THE VIDEOGRAPHER: Going off record. The time is 12:16. 12 (Lunch break.) 13 14 A F T E R N O O N S E S S I O N 15 THE VIDEOGRAPHER: We are	8		8	· · · · · · · · · · · · · · · · · · ·
10 relate to flexibility and things that 11 injure cells. 12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just  10 fine. 11 THE VIDEOGRAPHER: Going off record. The time is 12:16. 12 (Lunch break.) 13 14 (Lunch break.) 15 A F T E R N O O N S E S S I O N 17 18 THE VIDEOGRAPHER: We are			9	
11 injure cells.  12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just  11 THE VIDEOGRAPHER: Going off record. The time is 12:16.  12			10	· · · · · · · · · · · · · · · · · · ·
12 Q. Is your can I rely on 13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 19 record. The time is 12:16. 10 In the second of the time is 12:16. 11 In the second of the time is 12:16. 12 record. The time is 12:16. 13 In the second of the time is 12:16. 14 (Lunch break.) 15 In the second of the time is 12:16. 16 In the second of the time is 12:16. 17 In the second of the time is 12:16. 18 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of the time is 12:16. 19 In the second of time is 12:16. 19 In the second of the time is 12:16. 19 In the second			11	THE VIDEOGRAPHER: Going off
13 your answer in Leavitt right there? 14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 18 Jean Leavitt right there? 19 A. Sure. 10 (Lunch break.) 11 AFTERNOON SESSION 12 Comparison of Leavitt right there? 13 Comparison of Leavitt right there? 14 (Lunch break.) 15 Comparison of Leavitt right there? 16 (Lunch break.) 17 Comparison of Leavitt right there? 18 THE VIDEOGRAPHER: We are		· ·	12	
14 A. Sure. 15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 14 (Lunch break.) 15 16 AFTERNOON SESSION 17 18 THE VIDEOGRAPHER: We are			13	
15 MR. SMITH: Okay. I'm 16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 19 THE VIDEOGRAPHER: We are			14	(Lunch break.)
16 getting ready to move to a 17 different section. Are we 18 breaking for lunch, are we just 18 AFTERNOON SESSION 17 18 THE VIDEOGRAPHER: We are			15	`
17 different section. Are we 17 18 breaking for lunch, are we just 18 THE VIDEOGRAPHER: We are	16	•	16	AFTERNOON SESSION
breaking for lunch, are we just 18 THE VIDEOGRAPHER: We are	17		17	
	18		18	THE VIDEOGRAPHER: We are
Sound to be the transfer triangle of the sound of thinking	19	going to plow through? What do	19	going back on record beginning
20 you want to do? 20 Media File Number 3. The time is	20		20	
21 THE WITNESS: Let's go 21 1:22.	21		21	1:22.
22 through. 22	22		22	
23 MR. FROST: Yeah, I was 23 EXAMINATION (Cont'd.)		MR. FROST: Yeah, I was	23	EXAMINATION (Cont'd.)
24 going to say 24	24	going to say	24	
going to say				

55 (Pages 214 to 217)

Page 218  1 BY MR. SMITH: 2 Q. All right. Doctor, we just 2 carcinogenesis." 3 took a lunch break, and I just have some 4 more questioning for you. 5 In your paper excuse me, 5 It's the it's six lines down state in your report for the MDL, you state, on 6 with, "Chronic inflammation," 7 Page 10, under Paragraph D, "Chronic 7 right. I'll read it again. 8 inflammation and foreign body 9 carcinogenesis." And I quote, "Chronic 9 Q. "Chronic inflammation inflammation over months and years can 10 months and years can result in	tly? rting
2 Q. All right. Doctor, we just 3 took a lunch break, and I just have some 4 more questioning for you. 5 In your paper excuse me, 6 in your report for the MDL, you state, on 7 Page 10, under Paragraph D, "Chronic 8 inflammation and foreign body 9 carcinogenesis." 2 carcinogenesis." 3 A. Yes. 5 It's the it's six lines down state with, "Chronic inflammation," 7 right. I'll read it again. 8 A. Yes. 9 carcinogenesis." 9 Q. "Chronic inflammation	tly? rting
took a lunch break, and I just have some more questioning for you.  In your paper excuse me, in your report for the MDL, you state, on Page 10, under Paragraph D, "Chronic inflammation and foreign body carcinogenesis." And I quote, "Chronic  A. Yes.  Q. Did I read that correct with, "Chronic inflammation," with, "Chronic inflammation," right. I'll read it again. A. Yes.  Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. A. Yes.  Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. Q. Did I read that correct with, "Chronic inflammation,"	rting
more questioning for you.  In your paper excuse me, in your report for the MDL, you state, on Page 10, under Paragraph D, "Chronic inflammation and foreign body carcinogenesis." And I quote, "Chronic  4 Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. A. Yes. Q. Did I read that correct with, "Chronic inflammation," right. I'll read it again. A. Yes. Q. "Chronic inflammation,"	rting
In your paper excuse me, in your report for the MDL, you state, on Page 10, under Paragraph D, "Chronic inflammation and foreign body carcinogenesis." And I quote, "Chronic  It's the it's six lines down state, on with, "Chronic inflammation," right. I'll read it again. A. Yes. Q. "Chronic inflammation	rting
in your report for the MDL, you state, on Page 10, under Paragraph D, "Chronic inflammation and foreign body carcinogenesis." And I quote, "Chronic  in your report for the MDL, you state, on with, "Chronic inflammation," right. I'll read it again. A. Yes. Q. "Chronic inflammation	
7 Page 10, under Paragraph D, "Chronic 7 right. I'll read it again. 8 inflammation and foreign body 8 A. Yes. 9 carcinogenesis." And I quote, "Chronic 9 Q. "Chronic inflammation	to the
8 inflammation and foreign body 8 A. Yes. 9 carcinogenesis." And I quote, "Chronic 9 Q. "Chronic inflammation	
9 carcinogenesis." And I quote, "Chronic 9 Q. "Chronic inflammation	
inflammation over months and years can   10 months and years can result in	
result in many diseases, including 11 diseases including cancers but	
cancers, but has not been established as 2 been established as a cause of c	
a cause of ovarian cancer, and there is cancer, and there is evidence the	nat is
evidence that is difficult to reconcile 14 difficult to reconcile with the	
with the inflammation hypothesis." And 15 inflammation hypothesis." Yo	u cite Ni,
16 you have Ni cited. 16 et al., 2012.	
And then you go on to say, 17 "Notably Rakoff-Naho	oum,
18 "The relationship between cancer and 18 2006, cautions, 'The relationship	ip between
inflammation is not simple and cannot be 19 cancer and inflammation is not	simple and
reduced to one grand theory," quoting 20 cannot be reduced to one grand	theory.'"
21 Rakoff-Nahoum, 2006. Do you recall that 21 Did I read that correctl	•
22 in your report? 22 A. You did.	•
23 A. Yes. Do you 23 Q. Okay. And this is in	vour
MR. FROST: So yeah, I was 24 MDL report as part of your opi	
1.12 2 1 open as pane of your op	
Page 219	Page 221
going to say, can we mark a copy 1 this case, correct?	
2 of the report? It might make it 2 A. It is.	
3 easier. 3 MR. SMITH: I'm go	oing to try
4 MR. SMITH: Sure. I have 4 to make this as easy as p	ossible.
5 some copies. 5 But I put together it's	a
6 (Document marked for 6 two-sided document.	
7 identification as Exhibit 7 I'm going to mark it	as the
8 Mossman-21.) 8 next exhibit. It's going t	
9 BY MR. SMITH: 9 12. And I created this.	
10 Q. I'm going to mark a clean 10 MR. FROST: Object	ct for the
11 copy. 11 record the use to compil	
MR. SMITH: Can I keep one 12 created. This is two page	
of them? 13 only have one.	,
14 MR. FROST: Sure. I was 14 But to finish my objection	ection.
going to say, is one marked up? 15 but yeah, I object to the	
16 MR. SMITH: Yeah. 16 you know, exhibits that	
17 BY MR. SMITH: 17 created.	<i>, 0 u</i>
18 Q. And that would be the next 18 MR. SMITH: There	should be
19 numbered exhibit, Exhibit 21. And, 19 a back and front.	, should be
20 Doctor, I was reading on Page 10 of your 20 MR. FROST: That's	s what I
21 report. 21 figured. Yeah, it's just the	
22 A. Okay. 22 THE WITNESS: It's	
	o just Fage
	aht
24 Right in that first paragraph under, 24 MR. SMITH: All right	giii.

56 (Pages 218 to 221)

	Page 222		Page 224
1	Well, let's do this. I'm going to	1	No. I actually scanned it because
2	mark and we'll go through it.	2	it was presented to me in another
3	I'm going to have to probably do	3	matter while on the stand. So I
4	it back on the Elmo because I	4	did not look at it in detail.
5	don't know what happened. They	5	BY MR. SMITH:
6	copied this downstairs. I	6	Q. Okay. So you've not read
7	don't I don't have an	7	this back to front, this draft screening
8	explanation.	8	assessment from Health Canada?
9	I'm going to mark, which is	9	A. That's that's correct.
10	the back and front, which you just	10	Q. You were just asked
11	have the front, as Exhibit 24.	11	questions about certain parts of it on
12	And then when we get to the back	12	the stand, witness stand?
13		13	A. I was.
14	of it, I'm going to have to use the Elmo.	14	
15		15	Q. Okay. Was that in the Leavitt case?
16	(Document marked for identification as Exhibit	16	A. I believe so, yes.
17	Mossman-24.)	17	Q. Second quote from this draft
18	BY MR. SMITH:	18	screening assessment on this page:
19		19	"There is support for an association of
	Q. I just want to go through	20	inflammation and increased risk of
20 21	these studies. And just walk through	21	ovarian cancer."
	them with you and ask you some questions.	22	
22	They're quotes from these different	23	Would you agree or disagree
23	studies. And first let me ask you.	24	with that statement?
24	Let's go to the first one.	24	MR. FROST: Objection to
	Page 223		Page 225
1	The draft screening	1	form.
2	assessment "Talc, Environment, and	۱ م	myre yyum yedd y 11
3		2	THE WITNESS: I would
9	Climate Change," Canada, Health Canada	3	disagree with both of them.
4	Climate Change," Canada, Health Canada December 2018. Did you use that as part		
		3	disagree with both of them.
4	December 2018. Did you use that as part	3 4	disagree with both of them. Although I think the first one
4 5	December 2018. Did you use that as part of your reliance materials for your	3 4 5	disagree with both of them. Although I think the first one states possible and hypothesis.
4 5 6	December 2018. Did you use that as part of your reliance materials for your opinion in this case?	3 4 5 6	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a
4 5 6 7	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not.	3 4 5 6 7	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree
4 5 6 7 8	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With	3 4 5 6 7 8	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them.
4 5 6 7 8 9 10	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible	3 4 5 6 7 8 9 10	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH:
4 5 6 7 8 9 10 11	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is	3 4 5 6 7 8 9	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the
4 5 6 7 8 9 10 11 12	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."	3 4 5 6 7 8 9 10	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second
4 5 6 7 8 9 10 11 12 13 14	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is	3 4 5 6 7 8 9 10 11 12 13	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have
4 5 6 7 8 9 10 11 12 13 14 15	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment	3 4 5 6 7 8 9 10 11 12 13	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your
4 5 6 7 8 9 10 11 12 13 14 15	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health	3 4 5 6 7 8 9 10 11 12 13	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case?
4 5 6 7 8 9 10 11 12 13 14 15 16	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment	3 4 5 6 7 8 9 10 11 12 13 14 15 16	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case? A. No, I see this is an
4 5 6 7 8 9 10 11 12 13 14 15 16 17	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment referenced here?  A. I have scanned it, yes. Q. You just said you hadn't	3 4 5 6 7 8 9 10 11 12 13 14 15	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case? A. No, I see this is an unpublished document.
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment referenced here?  A. I have scanned it, yes. Q. You just said you hadn't seen it. Now you say you scanned it.	3 4 5 6 7 8 9 10 11 12 13 14 15 16	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case? A. No, I see this is an unpublished document. Q. Well, it is an unpublished
4 5 6 7 8 9 10 11 12 13 14 15 16 17	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment referenced here?  A. I have scanned it, yes. Q. You just said you hadn't	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case? A. No, I see this is an unpublished document. Q. Well, it is an unpublished document that's been published. It's in
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment referenced here?  A. I have scanned it, yes. Q. You just said you hadn't seen it. Now you say you scanned it.	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case? A. No, I see this is an unpublished document. Q. Well, it is an unpublished document that's been published. It's in peer-reviewed literature.
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment referenced here?  A. I have scanned it, yes. Q. You just said you hadn't seen it. Now you say you scanned it. Which is it?	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case? A. No, I see this is an unpublished document. Q. Well, it is an unpublished document that's been published. It's in peer-reviewed literature. Taher, you've never read it?
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment referenced here?  A. I have scanned it, yes. Q. You just said you hadn't seen it. Now you say you scanned it. Which is it?  MR. FROST: Objection to	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case? A. No, I see this is an unpublished document. Q. Well, it is an unpublished document that's been published. It's in peer-reviewed literature. Taher, you've never read it? MR. FROST: Objection to
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	December 2018. Did you use that as part of your reliance materials for your opinion in this case?  A. I did not. Q. Okay. And it says, "With respect to talc specifically, local irritation leading to an inflammatory response is one of the possible mechanisms of tumor progression that is frequently hypothesized."  You've not read the Health Canada draft screening assessment referenced here?  A. I have scanned it, yes. Q. You just said you hadn't seen it. Now you say you scanned it. Which is it?  MR. FROST: Objection to form.	3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	disagree with both of them. Although I think the first one states possible and hypothesis. And again local irritation is a hypothesis. But I would disagree with both of them. BY MR. SMITH: Q. And the the second the third paragraph down cites the second article a second article, Taher. Have you read Taher in reliance of your opinions in this case? A. No, I see this is an unpublished document. Q. Well, it is an unpublished document that's been published. It's in peer-reviewed literature. Taher, you've never read it? MR. FROST: Objection to form.

57 (Pages 222 to 225)

1 published in the peer-review 2 literature, it hasn't appeared on 3 my searches. 4 MR. SMITH: And that is 5 I'm going to mark this as 6 Exhibit 22. 7 Is that correct? 8 (Document marked for identification as Exhibit 10 Mossman-22.) 11 MS. O'DELL: This is 24. 12 MR. SMITH: Oh my gosh. 13 MS. O'DELL: We didn't do a 14 20 15 MR. FROST: Oh, I see. 16 Okay. 17 MR. SMITH: Does it really 18 matter? 19 MR. FROST: I was going to 10 say we can do 22. I don't think 21 it has been 22 MR. MIZGALA: So this, this 23 is 24? 24 MR. SMITH: Yeah, this is  1 inflammation in local immunogenicity has been linked to causation of ovarian cancers in anything that I've read. 2 been linked to causation of ovarian cancers in anything that I've read. 2 document. I'm not sure where it's published. 3 I haven't seen this document and certainly I never saw it before my report. So I would wonder what's new and certainly I never saw it before my report. So I would wonder what's new and certainly I never saw it before my report. So I would wonder what's new and certainly I never saw it before my report. So I would wonder what's new about it and what's the source. I don't know of any of the authors and haven't really comment on this. 4 Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted to Health Canada for their risk assessment of talc not containing asbestos? 4 No, it  MR. FROST: Objection to form. 4 Page 227 4 Page 227 5 Page 227 6 document. I'm not sure where it's published. 6 Locument. I'm not sure where it's published. 7 I haven't seen this document and certainly I never saw it before my report. So I would wonder what's new and certainly I never saw it before my report. So I would wonder what's new and certainly I never saw it before my report. So I would wonder what's new and certainly I never saw it before my report. So I would wonder what's new and certainly I never saw it before my report. So I would wonder what's new and certainly I never saw it before my report. So I would wo
2 literature, it hasn't appeared on my searches. 4 MR. SMITH: And that is 5 I'm going to mark this as 6 Exhibit 22. 7 Is that correct? 8 (Document marked for identification as Exhibit
my searches.  MR. SMITH: And that is  I'm going to mark this as  Exhibit 22.  Is that correct?  Iopocument marked for  identification as Exhibit  MR. SMITH: Oh my gosh.  MR. SMITH: Oh my gosh.  MR. FROST: Oh, I see.  Okay.  MR. SMITH: Does it really  MR. SMITH: Does it really  matter?  MR. MIZGALA: So this, this  is 24?  MR. SMITH: Yeah, this is  A. No. This is an unpublished document. I'm not sure where it's published.  I haven't seen this document and certainly I never saw it before my report. So I would wonder what's new about it and what's the source. I don't know of any of the authors and haven't heard of them as well. So I couldn't really comment on this.  Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted assessment of talc not containing asbestos?  A. No. This is an unpublished document. I'm not sure where it's published.  I haven't seen this document and certainly I never saw it before my report. So I would wonder what's new about it and what's the source. I don't know of any of the authors and haven't heard of them as well. So I couldn't really comment on this.  Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted to the Health Canada for their risk assessment of talc not containing asbestos?  A. No. it  MR. FROST: Objection to form.  BY MR. SMITH:  Page 227  Page 228
4 MR. SMITH: And that is 5 I'm going to mark this as 6 Exhibit 22. 7 Is that correct? 8 (Document marked for 9 identification as Exhibit 10 Mossman-22.) 11 MS. O'DELL: This is 24. 12 MR. SMITH: Oh my gosh. 13 MS. O'DELL: We didn't do a 14 20 15 MR. FROST: Oh, I see. 16 Okay. 17 MR. SMITH: Does it really 18 matter? 19 MR. SMITH: Does it really 10 MR. SMITH: Does it really 11 MR. SMITH: Does it really 12 MR. SMITH: Does it really 13 MR. SMITH: Does it really 14 MR. SMITH: Does it really 15 MR. SMITH: Does it really 16 MR. SMITH: Does it really 17 MR. SMITH: Does it really 18 matter? 19 MR. FROST: I was going to 20 say we can do 22. I don't think 21 it has been 22 MR. MIZGALA: So this, this 23 is 24? 24 MR. SMITH: Yeah, this is  Page 227  Page 227  Q. But you haven't read Taher? A. No. This is an unpublished document. I'm not sure where it's published. 4 A. No. This is an unpublished document. I'm not sure where it's published. 4 A. No would wonder what's new about it and what's the source. I don't know of any of the authors and haven't really comment on this.  Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted assessment of talc not containing asbestos?  A. No, it  MR. FROST: Objection to form.  BY MR. SMITH:  Page 227  Page 228
5 I'm going to mark this as 6 Exhibit 22. 7 Is that correct? 8 (Document marked for 9 identification as Exhibit 10 Mossman-22.) 11 MR. SMITH: Oh my gosh. 12 MR. FROST: Oh, I see. 15 MR. FROST: I was going to 16 MR. FROST: I was going to 17 MR. MIZGALA: So this, this 18 MR. SMITH: Yeah, this is 19 A. No. This is an unpublished document. I'm not sure where it's 17 published. 18 I haven't seen this document 19 and certainly I never saw it before my 10 report. So I would wonder what's new 11 about it and what's the source. I don't 12 know of any of the authors and haven't 13 heard of them as well. So I couldn't 14 20 15 MR. FROST: Oh, I see. 16 Okay. 16 knowledge about whether this 17 meta-analysis was produced and submitted 18 matter? 19 MR. FROST: I was going to 20 say we can do 22. I don't think 20 assessment of talc not containing 21 it has been 22 MR. MIZGALA: So this, this 23 is 24? 24 MR. SMITH: Yeah, this is 25 A. No. This is an unpublished document. I'm not sure where it's published. 26 document. I'm not sure where it's published.  1 haven't seen this document and certainly I never saw it before my report. So I would wonder what's new about it and what's the source. I don't know of any of the authors and haven't heard of them as well. So I couldn't really comment on this. Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted to Health Canada for their risk assessment of talc not containing asbestos? 19 A. No, it MR. FROST: Objection to form.  Page 227  Page 227
6 Exhibit 22. 7 Is that correct? 8 (Document marked for 9 identification as Exhibit 9 In American Mossman-22.) 10 Mossman-22.) 11 MS. O'DELL: This is 24. 12 MR. SMITH: Oh my gosh. 13 MS. O'DELL: We didn't do a 14 20 15 MR. FROST: Oh, I see. 16 Okay. 17 MR. SMITH: Does it really 18 matter? 18 matter? 19 MR. FROST: I was going to 20 say we can do 22. I don't think 21 it has been 22 MR. MIZGALA: So this, this 22 MR. SMITH: Yeah, this is 24 Moscument. I'm not sure where it's published.  6 document. I'm not sure where it's published.  7 published.  8 I haven't seen this document and certainly I never saw it before my report. So I would wonder what's new about it and what's the source. I don't know of any of the authors and haven't really comment on this.  9 Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted to Health Canada for their risk assessment of talc not containing asbestos?  10 document. I'm not sure where it's published.  11 And certainly I never saw it before my report. So I would wonder what's new about it and what's the source. I don't heave of any of the authors and haven't really comment on this.  12 Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted to Health Canada for their risk assessment of talc not containing asbestos?  14 A. No, it MR. FROST: Objection to form.  15 MR. SMITH: Yeah, this is 24 MR. SMITH:
Is that correct?  (Document marked for identification as Exhibit 9 and certainly I never saw it before my 10 Mossman-22.) 10 report. So I would wonder what's new 11 MS. O'DELL: This is 24. 11 about it and what's the source. I don't 12 MR. SMITH: Oh my gosh. 12 know of any of the authors and haven't 13 MS. O'DELL: We didn't do a 13 heard of them as well. So I couldn't 14 20 14 really comment on this. 15 MR. FROST: Oh, I see. 15 Q. You don't know have any 16 NGAy. 16 knowledge about whether this 17 meta-analysis was produced and submitted 18 matter? 18 to Health Canada for their risk 19 MR. FROST: I was going to 19 assessment of talc not containing 19 aspessor? 19 A. No, it 10 MR. FROST: Objection to 19 form. 10 MR. FROST: Objection to 19 MR. SMITH: Yeah, this is 10 MR. SMITH: Page 227
8 (Document marked for identification as Exhibit 9 identification as Exhibit 9 and certainly I never saw it before my report. So I would wonder what's new about it and what's the source. I don't know of any of the authors and haven't really comment on this.  12 MR. SMITH: Oh my gosh. 12 know of any of the authors and haven't heard of them as well. So I couldn't really comment on this.  13 MR. FROST: Oh, I see. 15 Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted to Health Canada for their risk assessment of talc not containing asbestos?  14 I haven't seen this document and certainly I never saw it before my about it and what's he source. I don't heavily in the source. I don't heavily in the source. I don't heavily in the source of the mas well. So I couldn't and what's he source. I don't heavily in the source of the mas well. So I couldn't heavily in the source of the mas well. So I couldn't heavily in the source of the mas well. So I couldn't heavily in the source of the mas well. So I couldn't heavily in
9 identification as Exhibit 10 Mossman-22.) 11 MS. O'DELL: This is 24. 11 about it and what's the source. I don't 12 MR. SMITH: Oh my gosh. 13 MS. O'DELL: We didn't do a 14 20 15 MR. FROST: Oh, I see. 16 Okay. 17 MR. SMITH: Does it really 18 matter? 19 MR. FROST: I was going to 20 say we can do 22. I don't think 21 it has been 22 MR. MIZGALA: So this, this 23 is 24? 24 MR. SMITH: Yeah, this is 29 and certainly I never saw it before my 10 report. So I would wonder what's new about it and what's the source. I don't 11 about it and what's the source. I don't 12 know of any of the authors and haven't 13 heard of them as well. So I couldn't 14 really comment on this. 15 Q. You don't know have any 16 knowledge about whether this 17 meta-analysis was produced and submitted 18 assessment of talc not containing 20 assessment of talc not containing 21 A. No, it 22 MR. MIZGALA: So this, this 23 is 24? 24 MR. SMITH: Yeah, this is 25 MR. SMITH: 27 Page 227
Mossman-22.)  MS. O'DELL: This is 24.  MR. SMITH: Oh my gosh.  MS. O'DELL: We didn't do a  MR. SMITH: We didn't do a  MR. FROST: Oh, I see.  Okay.  MR. SMITH: Does it really  matter?  MR. FROST: I was going to  say we can do 22. I don't think  mit has been  MR. MIZGALA: So this, this  MR. SMITH: Yeah, this is  10  report. So I would wonder what's new about it and what's the source. I don't  know of any of the authors and haven't  heard of them as well. So I couldn't  really comment on this.  Q. You don't know have any  knowledge about whether this  meta-analysis was produced and submitted  to Health Canada for their risk  assessment of talc not containing  asbestos?  A. No, it  MR. FROST: Objection to  form.  Page 227  Page 228
MS. O'DELL: This is 24.  MR. SMITH: Oh my gosh.  MS. O'DELL: We didn't do a  MR. FROST: Ohie authors and haven't  MR. SMITH: We and be a well. So I couldn't  really comment on this.  Q. You don't know have any  knowledge about whether this  meta-analysis was produced and submitted  to Health Canada for their risk  assessment of talc not containing  asbestos?  MR. FROST: Objection to  is 24?  MR. FROST: Objection to  form.  Page 229  Page 229
MR. SMITH: Oh my gosh.  MS. O'DELL: We didn't do a  MR. FROST: Oh, I see.  MR. SMITH: Does it really  MR. SMITH: Does it really  MR. SMITH: Page 225  Page 225  Page 225
MS. O'DELL: We didn't do a  13 heard of them as well. So I couldn't 14 really comment on this.  15 MR. FROST: Oh, I see. 15 Q. You don't know have any 16 knowledge about whether this 17 MR. SMITH: Does it really 18 matter? 19 MR. FROST: I was going to 20 say we can do 22. I don't think 20 assessment of talc not containing 20 say we can do 22. I don't think 21 it has been 22 MR. MIZGALA: So this, this 23 is 24? 24 MR. SMITH: Yeah, this is  Page 227  Page 229
14 20 15 MR. FROST: Oh, I see. 16 Okay. 17 MR. SMITH: Does it really 18 matter? 19 MR. FROST: I was going to 20 say we can do 22. I don't think 21 it has been 22 MR. MIZGALA: So this, this 23 is 24? 24 MR. SMITH: Yeah, this is 25 Q. You don't know have any 26 knowledge about whether this 27 meta-analysis was produced and submitted 28 to Health Canada for their risk 29 assessment of talc not containing 20 asbestos? 21 A. No, it 22 MR. FROST: Objection to 23 form. 24 Page 227  Page 229
MR. FROST: Oh, I see.  Okay.  MR. SMITH: Does it really matter?  MR. FROST: I was going to say we can do 22. I don't think it has been  MR. MIZGALA: So this, this  MR. SMITH: Yeah, this is  Okay.  Q. You don't know have any knowledge about whether this meta-analysis was produced and submitted to Health Canada for their risk assessment of talc not containing asbestos?  A. No, it  MR. FROST: Objection to form.  BY MR. SMITH:  Page 227  Page 229
Okay.  MR. SMITH: Does it really  matter?  MR. FROST: I was going to  say we can do 22. I don't think  it has been  MR. MIZGALA: So this, this  assessment of talc not containing  asbestos?  MR. FROST: Objection to  is 24?  MR. SMITH: Yeah, this is  And the product and submitted to Health Canada for their risk  assessment of talc not containing  asbestos?  And No, it  MR. FROST: Objection to  form.  BY MR. SMITH:  Page 229
MR. SMITH: Does it really matter?  MR. FROST: I was going to say we can do 22. I don't think ti has been  MR. MIZGALA: So this, this assessment of talc not containing asbestos?  MR. FROST: I was going to asbestos?  MR. MIZGALA: So this, this assessment of talc not containing asbestos?  MR. FROST: Objection to form.  MR. SMITH: Yeah, this is  Page 227  Page 229
18 matter? 19 MR. FROST: I was going to 20 say we can do 22. I don't think 21 it has been 22 MR. MIZGALA: So this, this 23 is 24? 24 MR. SMITH: Yeah, this is  18 to Health Canada for their risk 29 assessment of talc not containing 20 asbestos? 21 A. No, it 22 MR. FROST: Objection to 23 form. 24 BY MR. SMITH:  Page 227  Page 229
MR. FROST: I was going to say we can do 22. I don't think that sheen Reference containing assessment of talc not containing asbestos? A. No, it BY MR. FROST: Objection to form. BY MR. SMITH:  Page 227  Page 229
20 say we can do 22. I don't think 20 asbestos? 21 it has been 21 A. No, it 22 MR. MIZGALA: So this, this 22 MR. FROST: Objection to 23 is 24? 23 form. 24 MR. SMITH: Yeah, this is 24 BY MR. SMITH:  Page 227  Page 229
21       it has been       21       A. No, it         22       MR. MIZGALA: So this, this       22       MR. FROST: Objection to         23       is 24?       23       form.         24       MR. SMITH: Yeah, this is       24       BY MR. SMITH:    Page 227 Page 229
MR. MIZGALA: So this, this 22 MR. FROST: Objection to is 24? 23 form.  MR. SMITH: Yeah, this is 24 BY MR. SMITH:  Page 227  Page 227
23 is 24? 23 form. 24 MR. SMITH: Yeah, this is 24 BY MR. SMITH:  Page 227 Page 229
24 MR. SMITH: Yeah, this is 24 BY MR. SMITH:  Page 227 Page 229
Page 227 Page 229
1 24 1 O Okov
$\downarrow  \perp  \downarrow \uparrow -$
2 MR. FROST: So I think this 2 A. It's not in the
3 one will be 22. 3 peer-reviewed literature. And I'm
4 MR. SMITH: It doesn't 4 unfamiliar with Dr. Taher or any of the
5 matter what number. 5 other authors in terms of their
6 MR. FROST: We can use 22 6 contributions to the field.
7 and 23 now. 7 Q. Next is a a study called
8 MR. SMITH: Yeah. Okay. 8 Penninkilampi 2018. You referenced that
9 BY MR. SMITH: 9 earlier.
10 Q. This is a systematic review 10 Did you rely on the
of the meta-analysis of the association 11 Penninkilampi study for the basis of any
between perineal use of talc and risk of 12 of your opinions in this case?
ovarian cancer. Have you read and relied 13 A. Yes. But I emphasize that
on this study in support of your opinion 14 this was a meta-analysis and a an
15 in this case? 15 epidemiological study that didn't look
16 A. I have not seen this study 16 as at the quote as any foreign bodies.
17 before. 17 And so I wouldn't agree with this
• 1
and alteration in local immunogenicity 20 any information in this article or in
21 are possible mechanisms." 21 other ones that talc would ascend
Would you agree with that, 22 perineally to the ovary.
23 as far as mechanisms for ovarian cancer? 23 Q. Quote, if chronic and I'm
24 A. I don't think that chronic 24 quoting Penninkilampi. If chronic

58 (Pages 226 to 229)

	Page 230		Page 232
1	inflammation due to ascending foreign	1	But as I remember this statement,
2	bodies is indeed the mechanism by which	2	it was referenced to a hypothesis
3	tale is associated with increased ovarian	3	paper by Ness and I believe it
4	cancer, then these revoked results fit	4	was Cottreau in 1999 or 2000. And
5	the picture. And you said that you don't	5	that was the reference for this
6	believe that talc can ascend through the	6	statement. Certainly not the
7	fallopian tubes to the ovaries; is that	7	paper which I believe was looking
8	correct?	8	at systemic markers of
9	A. And I'm	9	inflammation and not ovarian
10		10	related markers in the ovary.
	Q. And we'll get to that in a	11	BY MR. SMITH:
11	minute about migration.	12	
12	MR. FROST: Objection to		Q. There's another quote from
13	form.	13	the Trabert study. "Our studies provide
14	THE WITNESS: Yeah, I think	14	additional evidence that inflammation
15	that this the question if is	15	plays an important role in ovarian
16	indeed the mechanism is unproven.	16	carcinogenesis."
17	And certainly not in the	17	Would you agree or disagree
18	Penninkilampi epidemiological	18	with that statement from Trabert?
19	meta-analysis.	19	MR. FROST: Objection to
20	BY MR. SMITH:	20	form.
21	Q. Have you read the Trabert,	21	THE WITNESS: Again, I don't
22	Pinto and Hartge, et al., 2014 document	22	have the paper in front of me, but
23	and used that as a basis of your opinions	23	Trabert did not look at localized
24	in this case?	24	inflammation in the ovary. I
	Page 231		Page 233
1	A. I have.	1	believe this was a study where
2	Q. And quote from that study,	2	they looked at a total of over 40
3	"Epidemiologic evidence implicates	3	markers of inflammation and found
4	chronic inflammation as a central	4	only two systemically in
5	mechanism in the pathogenesis of ovarian	5	individuals with preexisting
6	cancer."	6	cancer.
7	What's pathogenesis means?	7	So, if it does play a role
8	A. Pathogenesis means the	8	in ovarian carcinogenesis, it
9	development of disease. So it could be	9	<u> </u>
٠,	actorophicit of disease. Bo it could be	. )	
	any it could be talking about anything	1	certainly is very speculative with
10	any it could be talking about anything	10	regard to causation.
10 11	from causation to later stages of	10 11	regard to causation. BY MR. SMITH:
10 11 12	from causation to later stages of disease.	10 11 12	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem
10 11 12 13	from causation to later stages of disease.  Q. Well, here, "Epidemiologic	10 11 12 13	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states:
10 11 12 13 14	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation	10 11 12 13 14	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional
10 11 12 13 14 15	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the	10 11 12 13 14 15	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional
10 11 12 13 14 15	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the pathogenesis of ovarian cancer, the most	10 11 12 13 14 15 16	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional evidence that inflammation plays an
10 11 12 13 14 15 16 17	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the pathogenesis of ovarian cancer, the most lethal gynecologic cancer among women in	10 11 12 13 14 15 16 17	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional evidence that inflammation plays an important role in ovarian
10 11 12 13 14 15 16 17	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the pathogenesis of ovarian cancer, the most lethal gynecologic cancer among women in the United States."	10 11 12 13 14 15 16 17 18	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional evidence that inflammation plays an important role in ovarian carcinogenesis."
10 11 12 13 14 15 16 17 18	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the pathogenesis of ovarian cancer, the most lethal gynecologic cancer among women in the United States."  Would you agree or disagree	10 11 12 13 14 15 16 17 18	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional evidence that inflammation plays an important role in ovarian carcinogenesis."  It's pretty direct there.
10 11 12 13 14 15 16 17 18 19 20	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the pathogenesis of ovarian cancer, the most lethal gynecologic cancer among women in the United States."  Would you agree or disagree with that statement from Trabert?	10 11 12 13 14 15 16 17 18 19 20	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional evidence that inflammation plays an important role in ovarian carcinogenesis."  It's pretty direct there. It doesn't say anything about hypothesis
10 11 12 13 14 15 16 17 18 19 20 21	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the pathogenesis of ovarian cancer, the most lethal gynecologic cancer among women in the United States."  Would you agree or disagree with that statement from Trabert?  MR. FROST: Objection to	10 11 12 13 14 15 16 17 18 19 20 21	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional evidence that inflammation plays an important role in ovarian carcinogenesis."  It's pretty direct there. It doesn't say anything about hypothesis or or any of the qualifiers that
10 11 12 13 14 15 16 17 18 19 20 21 22	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the pathogenesis of ovarian cancer, the most lethal gynecologic cancer among women in the United States."  Would you agree or disagree with that statement from Trabert?  MR. FROST: Objection to form.	10 11 12 13 14 15 16 17 18 19 20 21 22	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional evidence that inflammation plays an important role in ovarian carcinogenesis." It's pretty direct there. It doesn't say anything about hypothesis or or any of the qualifiers that you're saying, Doctor, does it?
10 11 12 13 14 15 16 17 18 19 20 21	from causation to later stages of disease.  Q. Well, here, "Epidemiologic evidence implicates chronic inflammation as a central mechanism in the pathogenesis of ovarian cancer, the most lethal gynecologic cancer among women in the United States."  Would you agree or disagree with that statement from Trabert?  MR. FROST: Objection to	10 11 12 13 14 15 16 17 18 19 20 21	regard to causation. BY MR. SMITH: Q. Well, it doesn't seem speculative here. The quote states: "Our study provides additional evidence" "provides additional evidence that inflammation plays an important role in ovarian carcinogenesis."  It's pretty direct there. It doesn't say anything about hypothesis or or any of the qualifiers that

59 (Pages 230 to 233)

1 THE WITNESS: Yeah, let me emphasize though, here they are language emphasize though, here they are emphasize though, here they are language emphasize though, here they are language emphasize though, here they are emphasize though, here they are language emphasize though, here they are language emphasize though, here they are emphasize though, and that statement?  3 Indicate the same ones that form.  4 inflammation in the serum of the wind that statement?  5 MR. FROST: Objection to form.  10 plays a critical role is so whether inflammation and that they found are the source of the saking both and they are they are they are the source of this statement comes from, whether it's good and endometriosis are consistent with previous findings and compatible with the phypothesis that these factors increase the phypothesis that these		Page 234		Page 236
2 emphasize though, here they are 3 looking at systemic markers of 4 inflammation in the serum of 5 patients, and some of the markers 6 they found are the same ones that 6 they found are the same ones that 7 have been detected in lung cancers 8 or in other models of cancer. 9 So whether inflammation 10 plays a critical role is 11 speculative. 12 BY MR. SMITH: 13 Q. They didn't say it was 14 speculative? 15 MR. FROST: Objection to 16 form. 17 BY MR. SMITH: 18 Q. Correct? 19 A. They did not look at 10 inflammation in the ovary. So you can't 21 equate systemic inflammatory markers with 22 causative roles in disease especially if 23 you're looking at individuals who had 24 disease.  Page 235  1 MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 15 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that 24 with that statement?  THE WITNESS: I would 25 illustrated that endometriosis is linked to the risk of ovarian cancer and that 26 illustrated that endometriosis is linked to the risk of ovarian cancer and that 27 cancer. Other studies have shown that it's not. 28 Illustrated that endometriosis is illustrated that endometriosis is linked to the risk of ovarian cancer and that 29 with the statking shere shown that it's not. 29 Q. Did you led on Merritt 20 Q. Leave you relied on Merritt 20 Q. Leave you relied on Merritt 21 Q. Well, let'	1		1	
looking at systemic markers of inflammation in the serum of they found are the same ones that they found are the same ones that have been detected in lung cancers or in other models of cancer. So whether inflammation or or in other models of cancer. So whether inflammation or or in other models of cancer. So whether inflammation or or in other models of cancer. So whether inflammation or or in other models of cancer. So whether inflammation or or or other studies have shown that it's not. So you can't cancer of the studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you can't cancer. Other studies have shown that it's not. So you repinions in this case?    MR. FROST: Objection to form.			l	, ,
form.   form		<u> </u>		
patients, and some of the markers they found are the same ones that 7 have been detected in lung cancers 8 or in other models of cancer. 8 or in other models of cancer. 9 So whether inflammation 9 So whether inflammation 9 cancer. 010 plays a critical role is speculative. 11 speculative. 11 Symm. SMITH: 12 Q. They didn't say it was speculative? 14 Symm. SMITH: 15 MR. FROST: Objection to 16 form. 16 form. 16 form. 17 BY MR. SMITH: 18 Q. Correct? 18 Q. Well, let's look. 19 THE WITNESS: Do we have the 19 references? 19 A. They did not look at 19 references? 10 was a side and disease. 10 MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her about questions about papers that aren't in front of her. 18 BY MR. SMITH: 18 BY MR. SMITH: 19 Q. Did you look at the Wu 2009 paper? 10 paper? 10 paper. 11 A. I did, and again, this is an 12 epidemiology paper. 17 dave to look at it again to see where the source of this statement comes from, whether it's reference to another study or whether he's talking about specific things here sidentified as variables. 19 Q. Quote, "Our findings on tale and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase 12 the risk of ovarian cancer and that 19 provious findings and compatible with the hypothesis that these factors increase 23 the risk of ovarian cancer and that 23 case?				<u> </u>
fe they found are the same ones that have been detected in lung cancers or in other models of cancer.  8 or in other models of cancer.  9 So whether inflammation plays a critical role is speculative.  10 plays a critical role is speculative.  11 speculative.  12 BY MR. SMITH: 13 Q. They didn't say it was speculative?  15 MR. FROST: Objection to form. 16 form. 17 BY MR. SMITH: 18 Q. Correct? 19 A. They did not look at inflammation in the ovary. So you can't equate systemic inflammatory markers with casasive roles in disease especially if you're looking at individuals who had disease.  10 MR. FROST: And she said it in her answer. I was trying to a get it in before. I want to lodge the general objection that I think it's improper to be asking her aren't in front of her.  18 BY MR. SMITH: 20 MR. FROST: And she said it in her answer. I was trying to a get it in before. I want to lodge the general objection that I think it's improper to be asking her aren't in front of her.  19 Q. Did you look at the Wu 2009 paper? 10 paper? 11 A. I did, and again, this is an epidemiology paper. I'd have to look at it again to see where the source of this tereference to another study or whether he's talking about specific things here sidentified as variables. 19 Q. Quote, "Our findings on tale and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer. In lung to rink in this case?  10 BY MR. SMITH: 11 Should have it. 12 Counter that it is studies that it again to see where the source of this it again to see where the source of this it again to see where the source of this it again to see where the source of this it again to see where the source of this it is dentified as variables. 19 Q. Quote, "Our findings on tale and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  19 Ar they did not look at the was a cancer. Other studies have shown that the				
have been detected in lung cancers or in other models of cancer. So whether inflammation plays a critical role is speculative.  BY MR. SMITH:  Q. They didn't say it was speculative?  MR. FROST: Objection to form.  BY MR. SMITH:  Q. Correct?  A. They did not look at inflammation in the ovary. So you can't equate systemic inflammatory markers with causative roles in disease especially if causative roles in disease especially if gay you're looking at individuals who had disease.  Page 235  MR. FROST: And she said it in her answer. I was trying to get it in before. I want to lodge the general objection that I think it is improper to be asking her about questions about papers that aren't in front of her.  BY MR. SMITH:  BY MR. SMITH:  Causative roles in disease especially if get it in before. I want to lodge the general objection that I think it is improper to be asking her about questions about appers that require in a content study or whether he's talking about specific things here she's talking about specific things here she hypothesis that these factors increase gardinary and that it of the stalking about specific things here she hypothesis that these factors increase and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  BY MR. SMITH:  Ch. A. Again, I'd have to go back and - did I list this in my references? Then I could rell you.  Q. Well, let's look. THE WITNESS: Do we have the references aren't attached.  Should have it.  Chocument marked for identification as Exhibit identification as Exhibit Mossman-23.)  BY MR. SMITH:  Ch. A. I did, and again,				
8 or in other models of cancer. 9 So whether inflammation 10 plays a critical role is speculative. 11 speculative. 12 BY MR. SMITH: 13 Q. They didn't say it was speculative? 15 MR. FROST: Objection to form. 16 form. 17 BY MR. SMITH: 18 Q. Correct? 19 A. They did not look at inflammation in the ovary. So you can't equate systemic inflammatory markers with 22 causative roles in disease especially if you're looking at individuals who had disease.  Page 235  1 MR. FROST: And she said it in her answer. I was trying to get it in before. I want to lodge 4 the general objection that I think is in mry form of her. aren't in front o	_			
9 So whether inflammation plays a critical role is speculative. 11 speculative. 12 BY MR. SMITH: 13 Q. They didn't say it was speculative? 15 MR. FROST: Objection to form. 16 form. 17 BY MR. SMITH: 19 A. They did not look at in the ovary. So you can't causative roles in disease especially if causative roles in disease especially if causative roles in disease especially if in her answer. I was trying to get it in before. I want to lodge 4 the general objection that I think it's improper to be asking her a about questions about papers that a ren't in front of her. 18 BY MR. SMITH: 2				
plays a critical role is speculative.  11				
11 speculative.  12 BY MR. SMITH: 13 Q. They didn't say it was 14 speculative? 15 MR. FROST: Objection to 16 form. 17 BY MR. SMITH: 18 Q. Correct? 19 A. They did not look at 19 a. They did not look at 19 a. They did not look at 20 inflammation in the ovary. So you can't 21 equate systemic inflammatory markers with 22 causative roles in disease especially if 23 you're looking at individuals who had 24 disease.  Page 235  1 MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 22 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that 23 the risk of ovarian cancer and that 24 provious findings and compatible with the 25 hypothesis that these factors increase 26 the risk of ovarian cancer and that 27 the risk of ovarian cancer and that 28 provious findings and compatible with the 29 hypothesis that these factors increase 20 the risk of ovarian cancer and that 21 previous findings and compatible with the 20 provious findings and compatible with the 21 provious findings and compatible with the 22 provious findings and compatible with the 23 the risk of ovarian cancer and that 24 the general opinions in this case? 25 provious findings and compatible with the 26 provious findings and compatible with the 27 provious findings and compatible with the 28 provious findings and compatible with the 29 provious f			l	
12 BY MR. SMITH: 13 Q. They didn't say it was 4 speculative? 15 MR. FROST: Objection to 16 form. 16 form. 17 BY MR. SMITH: 18 Q. Correct? 18 Q. Correct? 19 A. They did not look at 20 inflammation in the ovary. So you can't 21 equate systemic inflammatory markers with 22 causative roles in disease especially if 23 you're looking at individuals who had 24 disease.  Page 235  1 MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 15 if's improper to be asking her 26 about questions about papers that 27 aren't in front of her. 28 BY MR. SMITH: 29 Q. Did you look at the Wu 2009 210 paper? 211 A. I did, and again, this is an 212 epidemiology paper. I'd have to look at 213 it again to see where the source of this 214 statement comes from, whether it's 215 reference to another study or whether 216 he's talking about specific things here 217 such as talc and endometriosis that he's 218 identified as variables. 219 Q. Quote, 'Our findings on talc 220 and endometriosis are consistent with 221 previous findings and compatible with the 222 hypothesis that these factors increase 223 the risk of ovarian cancer and that 20 Doctor? 210 A. Again, 'I'd have to go back 211 and - did I list this in my references? 21 Then I could tell you. 22 A. Again, 'I'd have to go back 23 and endometriosis at was 19 24 and endometriosis and endometriosis that he's 25 identified as variables. 26 A. Again, 'I'd have to go back 27 A. Again, 'I'd have to go back 28 and end die li list his in my references? 28 Then I could tell you. 29 Q. Buck and endometriosis that he's 21 in her answer. I was trying to 22 references 24 MR. FROST: The references 25 aren't attached. 26 THE WITNESS: Yeah. 27 (Document marked for 28 identification as Exhibit 29 A. I did, and again, this is an 29 Q. Did you look at the Wu 2009 29 A. Let me just look at it just to make sure. 20 I can't remember if I 21 attached that reference. 21 A. No. 22 I did your updated, but I'm 23 going to attach this a		± *	1	
13 Q. They didn't say it was speculative?  14 speculative?  15 MR, FROST: Objection to 15 A. Again, I'd have to go back and did I list this in my references?  16 form.  17 BY MR, SMITH: 17 Then I could tell you.  20 Correct?  18 Q. Correct?  18 Q. Correct?  18 Q. Correct?  19 A. They did not look at inflammation in the ovary. So you can't equate systemic inflammatory markers with acausative roles in disease especially if 22 causative roles in disease especially if 22 and disease.  Page 235  1 MR, FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think it's improper to be asking her 6 about questions about papers that aren't in front of her. 7 aren't in front of her. 8 BY MR, SMITH:  9 Q. Did you look at the Wu 2009 paper?  10 paper?  11 A. I did, and again, this is an epidemiology paper. I'd have to look at it 3 it again to see where the source of this reference to another study or whether he's talking about specific things here such as talc and endometriosis that he's identified as variables.  19 Q. Quote, "Our findings on talc and endometriosis are consistent with previous findings and compatible with the 20 and endometriosis that he's identified as variables.  20 THE WITNESS: Do we have the references?  21 MR, FROST: The references aren't attached.  22 THE WITNESS: Yeah.  3 Should have it.  (Document marked for identification as Exhibit Mossman-23.)  3 BY MR, SMITH:  4 Should have it.  (Document marked for identification as Exhibit Mossman-23.)  3 BY MR, SMITH:  4 Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  20 A. Yes.  21 Doctor?  22 A. Yes.  23 The WITNESS: Yeah.  24 MR, SMITH: 10 In the with the previous findings and compatible with the phyothesis that these factors increase the provious findings and compatible with the phyothesis that these factors increase the provious findings and compatible with the phyothesis that th		•		
speculative?  MR. FROST: Objection to form.  MR. FROST: Objection to form.  BY MR. SMITH:  A. They did not look at inflammation in the ovary. So you can't equate systemic inflammatory markers with causative roles in disease especially if you're looking at individuals who had disease.  Page 235  MR. FROST: And she said it in her answer. I was trying to get it in before. I want to lodge the general objection that I think is improper to be asking her about questions about papers that aren't in front of her.  BY MR. SMITH:  A. I did, and again, this is an epidemiology paper. I'd have to look at it again to see where the source of this reference to another study or whether is defentified as variables.  A. Again, I'd have to go back and — did I list this in my references?  Then I could tell you.  Q. Well, let's look.  THE WITNESS: Do we have the referencess aren't attached.  A. Again, I'd have to go back and — did I list this in my references?  Then I could tell you.  Q. Well, let's look.  THE WITNESS: Do we have the references aren't attached.  S MR. FROST: And she said it in her answer. I was trying to get it in before. I want to lodge a get it in before. I want to lodge in her answer. I was trying to get it in before. I want to lodge a dientification as Exhibit Mossman-23.)  BY MR. SMITH:  BY MR. SMITH:  A. I did, and again, this is an epidemiology paper. I'd have to look at it again to see where the source of this statement comes from, whether it's reference to another study or whether lee's talking about specific things here such as talc and endometriosis that he's identified as variables.  A. No.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one carlier.  Q. Quote, "Our findings on tale and endometriosis findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  14				· · · · · · · · · · · · · · · · · · ·
15 MR. FROST: Objection to form.  16 form.  17 BY MR. SMITH:  18 Q. Correct?  19 A. They did not look at 19 The I could tell you.  20 inflammation in the ovary. So you can't 21 equate systemic inflammatory markers with 22 causative roles in disease especially if 22 ausative roles in disease especially if 23 you're looking at individuals who had 24 disease.  Page 235  1 MR. FROST: And she said it 1 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 8 G. D. Did you look at the Wu 2009 paper?  11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 15 reference 10 reference 11			l	
16 form. 17 BY MR. SMITH: 18 Q. Correct? 19 A. They did not look at 20 inflammation in the ovary. So you can't 21 equate systemic inflammatory markers with 22 causative roles in disease sepcially if 23 you're looking at individuals who had 24 disease.  Page 235  1 MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on tale 20 and endometriosis rae consistent with 21 previous findings and compatible with the 22 the risk of ovarian cancer and that 23 and - did I list this in my references? Then I could tell you. Q. Well, let's look. THE WITNESS: Do we have the references?  MR. FROST: The references aren't attached. THE WITNESS: Yeah. MR. SMITH: Hold on. I  Page 237  A. Let me just look at it.  Q. Is Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case?  A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Page 237  A. Let me just look at it just to make sure. Q. I can't remember if I attached that reference.  A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and		•		case?
17 BY MR. SMITH:   18 Q. Correct?   18 Q. Well, let's look.     19 A. They did not look at   19   THE WITNESS: Do we have the references?     20 inflammation in the ovary. So you can't   20   references?     21 equate systemic inflammatory markers with   21   MR. FROST: The references   aren't attached.     22 causative roles in disease especially if   22   aren't attached.     23 you're looking at individuals who had   23   THE WITNESS: Yeah.     24 disease.   Page 235   THE WITNESS: Yeah.     25 min FROST: And she said it   1   Should have it.   (Document marked for identification as Exhibit   Mossman-23.)     5 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     6 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     8 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     8 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   Mossman-23.)     9 min FROST: And she said it   1   (Document marked for identification as Exhibit   20   (Document marked for identification as Exhibit   20   (Document marked for identification as Exhibit   20   (Document marke		MR. FROST: Objection to	15	A. Again, I'd have to go back
18 Q. Correct? 19 A. They did not look at 20 inflammation in the ovary. So you can't 21 equate systemic inflammatory markers with 22 causative roles in disease especially if 23 you're looking at individuals who had 24 disease.  Page 235  Page 235  Page 237  1 MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that 24 constant and the vary. So you can't 25 meference. 26 MR. FROST: The references aren't attached. 27 MR. FROST: The references aren't attached. 28 aren't attached. 29 MR. SMITH: Hold on. I 20 MR. FROST: And she said it 20 in her answer. I was trying to 21 Should have it. 22 (Document marked for identification as Exhibit 23 M. Nossman-23.) 24 MRS. SMITH: 25 (Document marked for identification as Exhibit 26 (Document marked for identification as Exhibit 27 (Document marked for identification as Exhibit 28 (Document marked for identification as Exhibit 29 A. Let me just look at it just to make sure. 20 I can't remember if I attached that reference. 21 attached that reference. 22 A. No. 23 I day of the wave provided the provided that reference and reliance materials. I attached the amended one earlier. 24 Q. Did you rely on Merritt to form the basis of your opinions in this case? 25 form the basis of your opinions in this case?	16	form.	16	and did I list this in my references?
A. They did not look at inflammation in the ovary. So you can't equate systemic inflammatory markers with causative roles in disease especially if 22 aren't attached.  THE WITNESS: Do we have the references?  MR. FROST: The references aren't attached.  THE WITNESS: Yeah.  MR. SMITH: Hold on. I  Page 235  MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her about questions about papers that aren't in front of her.  BY MR. SMITH: 6 Q. Is Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case?  A. Let me just look at it just to make sure.  Q. I did, and again, this is an epidemiology paper. I'd have to look at 12 attached that reference.  A. No.  I did, and again, this is an epidemiology paper. I'd have to look at 12 attached that reference.  A. No.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Q. Q. Quote, "Our findings on talc and endometriosis are consistent with previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that  THE WITNESS: Do we have the references?  MR. FROST: The references aren't attached.  THE WITNESS: Do we have the references?  MR. FROST: And she said it 1 should have it.  (Document marked for identification as Exhibit 1 Mossman-23.)  BY MR. SMITH:  BY MR. SMITH:  O Li Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case?  A. Let me just look at it just to make sure.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?	17	BY MR. SMITH:	17	Then I could tell you.
20 inflammation in the ovary. So you can't 21 equate systemic inflammatory markers with 22 causative roles in disease especially if 23 you're looking at individuals who had 24 disease.  Page 235  Page 237  1 MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as tale and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on tale 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that  20 references? 21 MR. FROST: The references aren't attached. 22 aren't attached. 23 THE WITNESS: Yeah. MR. SMITH: Hold on. I  24 Should have it. (Document marked for identification as Exhibit 1 Mossman-23.)  BY MR. SMITH:  9 Q. Is Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case?  9 A. Let me just look at it just to make sure. Q. I can't remember if I attached that reference.  13 A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  19 Q. Quote, "Our findings on tale and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that	18	Q. Correct?	18	Q. Well, let's look.
equate systemic inflammatory markers with causative roles in disease especially if you're looking at individuals who had disease.  Page 235  Page 237  MR. FROST: The references aren't attached.  THE WITNESS: Yeah.  MR. SMITH: Hold on. I  Page 237  Decument marked for identification as Exhibit Mossman-23.)  BY MR. SMITH:  A lidid, and again, this is an epidemiology paper. I'd have to look at it again to see where the source of this it again to see where the source of this such as tale and endometriosis that he's identified as variables.  Q Q Quote, "Our findings on talc and endometriosis that these factors increase it erisk of ovarian cancer and that  MR. FROST: The references aren't attached.  MR. SMITH: Hold on. I  MR. SMITH: Hold on. I  Page 237  Page 237  Page 237  A No. (Document marked for identification as Exhibit Mossman-23.)  BY MR. SMITH:  A Let me just look at it just to make sure.  Q I can't remember if I attached that reference.  A. No. Q I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q Did you rely on Merritt to form the basis of your opinions in this case?  A Yes.	19	A. They did not look at	19	THE WITNESS: Do we have the
equate systemic inflammatory markers with causative roles in disease especially if you're looking at individuals who had disease.  Page 235  Page 237  MR. FROST: The references aren't attached.  THE WITNESS: Yeah.  MR. SMITH: Hold on. I  Page 237  Decument marked for identification as Exhibit Mossman-23.)  BY MR. SMITH:  A lidid, and again, this is an epidemiology paper. I'd have to look at it again to see where the source of this it again to see where the source of this such as tale and endometriosis that he's identified as variables.  Q Q Quote, "Our findings on talc and endometriosis that these factors increase it erisk of ovarian cancer and that  MR. FROST: The references aren't attached.  MR. SMITH: Hold on. I  MR. SMITH: Hold on. I  Page 237  Page 237  Page 237  A No. (Document marked for identification as Exhibit Mossman-23.)  BY MR. SMITH:  A Let me just look at it just to make sure.  Q I can't remember if I attached that reference.  A. No. Q I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q Did you rely on Merritt to form the basis of your opinions in this case?  A Yes.	20	inflammation in the ovary. So you can't	20	references?
22 causative roles in disease especially if 23 you're looking at individuals who had 24 disease.  Page 235  Page 235  Page 237  MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that  Page 237  Rh. SMITH: Hold on. I  1 should have it.  (Document marked for identification as Exhibit  Mossman-23.)  BY MR. SMITH:  Q. Is Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case?  A. Let me just look at it just to make sure.  Q. I can't remember if I attached that reference.  A. No.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?	21	equate systemic inflammatory markers with	21	MR. FROST: The references
you're looking at individuals who had disease.  Page 235  MR. SMITH: Hold on. I  Page 237  MR. FROST: And she said it in her answer. I was trying to get it in before. I want to lodge 3 identification as Exhibit Mossman-23.)  it's improper to be asking her 6 about questions about papers that aren't in front of her. 7 aren't in front of her. 8 BY MR. SMITH: 8 of your opinions in this case? 9 Q. Did you look at the Wu 2009 10 paper? 10 paper? 10 paper? 10 to make sure. 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 12 attached that reference. 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here such as talc and endometriosis that he's identified as variables. 18 identified as variables. 19 Q. Quote, "Our findings on talc and endometriosis are consistent with 21 previous findings and compatible with the 12 provious findings and compatible with the 12 hypothesis that these factors increase 23 the risk of ovarian cancer and that 19 case? 17 such as talc end endometriosis that these factors increase 23 the risk of ovarian cancer and that 19 case? 20 case? 19 case? 20 case? 19 case? 20 case? 21 case? 21 case? 22 case? 23 case?	22		22	aren't attached.
Page 235  Page 237  MR. FROST: And she said it in her answer. I was trying to 2 identification as Exhibit 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that aren't in front of her. 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 9 A. Let me just look at it just to make sure. 11 C. I can't remember if I attached that reference. 12 attached that reference. 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 16 he's talking about specific things here 17 such as tale and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 previous findings and compatible with the 22 the risk of ovarian cancer and that 23 case?  Page 237  MR. SMITH: Hold on. I  Should have it. (Document marked for identification as Exhibit 1 should have it. (Document marked for identification as Exhibit 4 (Document marked for identification as Exhibit 4 Mossman-23.)  BY MR. SMITH: 9 Q. Is Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case?  A. Let me just look at it just to make sure. Q. I can't remember if I attached that reference.  A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes. Q. Did you rely on Merritt to form the basis of your opinions in this case?	23		23	THE WITNESS: Yeah.
Page 235  MR. FROST: And she said it in her answer. I was trying to 2 identification as Exhibit 4 the general objection that I think 4 the general objection that I think 4 the general objection sabout papers that 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 7 studies that you relied on in the basis of your opinions in this case?  BY MR. SMITH: 8 of your opinions in this case?  Q. Did you look at the Wu 2009 9 A. Let me just look at it just to make sure.  10 paper? 10 to make sure.  11 A. I did, and again, this is an 11 quickly opinions in this case?  12 epidemiology paper. I'd have to look at 12 attached that reference.  13 it again to see where the source of this 13 he's talking about specific things here 14 he's talking about specific things here 15 identified as variables. 16 he's talking about specific things here 17 such as talc and endometriosis that he's identified as variables. 18 previous findings and compatible with the 19 previous findings and compatible with the 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that 23 case?	24		24	
1 MR. FROST: And she said it 2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that  1 should have it. (Document marked for identification as Exhibit A (Document marked for identification as Exhibit A (Document marked for identification as Exhibit A Mossman-23.)  BY MR. SMITH:  Q. Is Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case?  A. Let me just look at it just to make sure.  Q. I can't remember if I attached that reference.  A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Poctor? A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?				
2 in her answer. I was trying to 3 get it in before. I want to lodge 4 the general objection that I think 5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 9 A. Let me just look at it just 10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as tale and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on tale 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that 2 (Document marked for identification as Exhibit 4 Mossman-23.)  BY MR. SMITH: Q. Is Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case?  A. Let me just look at it just to make sure.  Q. I can't remember if I attached that reference.  A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?		Page 235		Page 237
get it in before. I want to lodge  4 the general objection that I think  5 it's improper to be asking her  6 about questions about papers that  7 aren't in front of her.  8 BY MR. SMITH:  9 Q. Did you look at the Wu 2009  10 paper?  11 A. I did, and again, this is an  12 epidemiology paper. I'd have to look at  13 it again to see where the source of this  14 statement comes from, whether it's  15 reference to another study or whether  16 he's talking about specific things here  17 such as talc and endometriosis that he's  18 identification as Exhibit  4 Mossman-23.)  BY MR. SMITH:  6 Q. Is Merritt 2008 one of the  7 studies that you relied on in the basis  6 of your opinions in this case?  9 A. Let me just look at it just  10 to make sure.  11 Q. I can't remember if I  21 attached that reference.  12 A. No.  13 A. No.  14 Q. I did your updated, but I'm  15 going to attach this as Exhibit 23, the  16 original key references and reliance  17 such as talc and endometriosis that he's  18 identification as Exhibit  19 Q. I did you opinions in this case?  10 A. No.  11 Q. I did your updated be updated, but I'm  12 going to attach this as Exhibit 23, the  13 original key references and reliance  14 materials. I attached the amended one  15 earlier.  16 original key references and reliance  17 materials. I attached the amended one  18 earlier.  19 Q. Quote, "Our findings on talc  20 and endometriosis are consistent with  20 A. Yes.  21 previous findings and compatible with the  22 hypothesis that these factors increase  23 the risk of ovarian cancer and that  24 form the basis of your opinions in this  25 form the basis of your opinions in this  26 case?		MR. FROST: And she said it	1	should have it.
the general objection that I think it's improper to be asking her about questions about papers that aren't in front of her.  BY MR. SMITH: Q. Is Merritt 2008 one of the studies that you relied on in the basis of your opinions in this case? Q. Did you look at the Wu 2009 Q. I can't remember if I attached that reference. A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one identified as variables. Q. Quote, "Our findings on talc and endometriosis are consistent with previous findings and compatible with the previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  A Mos.  A No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier. Doctor?  A. Yes. Q. Did you rely on Merritt to form the basis of your opinions in this case?		in her answer. I was trying to	2	(Document marked for
5 it's improper to be asking her 6 about questions about papers that 7 aren't in front of her. 8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 hypothesis that these factors increase 23 the risk of ovarian cancer and that  5 BY MR. SMITH: 6 Q. Is Merritt 2008 one of the 7 studies that you relied on in the basis 7 studies that you relied on in the basis 8 by MR. SMITH: 9 Q. Is Merritt 2008 one of the 7 studies that you relied on in the basis 8 that you relied on in the basis 9 A. Let me just look at it just 10 to make sure. 11 A. No. 12 attached that reference. 13 A. No. 14 Statement comes from, whether it's 15 going to attach this as Exhibit 23, the 16 original key references and reliance 17 materials. I attached the amended one 18 identified as variables. 19 Doctor? 20 A. Yes. 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that 25 Gorm the basis of your opinions in this 26 case?	3	get it in before. I want to lodge	3	identification as Exhibit
about questions about papers that aren't in front of her.  BY MR. SMITH: Q. Did you look at the Wu 2009 Q. Did you look at the Wu 2009 Q. Did, and again, this is an epidemiology paper. I'd have to look at it again to see where the source of this it again to see where the source of this reference to another study or whether he's talking about specific things here such as talc and endometriosis that he's identified as variables.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Q. Quote, "Our findings on talc and endometriosis are consistent with pypothesis that these factors increase and that the studies that you relied on in the basis of your opinions in this studies that you relied on in the basis of your opinions in this case?  Q. I can't remember if I attached that reference.  A. No.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Poctor?  A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?	4	the general objection that I think	4	Mossman-23.)
aren't in front of her.  BY MR. SMITH:  Q. Did you look at the Wu 2009  Paper?  A. I did, and again, this is an epidemiology paper. I'd have to look at statement comes from, whether it's reference to another study or whether he's talking about specific things here such as talc and endometriosis that he's identified as variables.  Q. Quote, "Our findings on talc and endometriosis are consistent with pypothesis that these factors increase are reliable to fixed as a studies that you relied on in the basis of your opinions in this case?  A. Let me just look at it just to make sure.  Q. I can't remember if I attached that reference.  A. No.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?	5	it's improper to be asking her	5	BY MR. SMITH:
8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 11 page provious findings and compatible with the 22 hypothesis that these factors increase 23 to make sure.  8 of your opinions in this case? 9 A. Let me just look at it just to make sure. 10 to make sure. 11 Q. I can't remember if I attached that reference. 12 attached that reference. 13 A. No. 14 Statement comes from, whether it's 14 Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier. 18 Doctor? 20 and endometriosis are consistent with 20 A. Yes. 21 previous findings and compatible with the 22 hypothesis that these factors increase 22 form the basis of your opinions in this case?	6	about questions about papers that	6	Q. Is Merritt 2008 one of the
8 BY MR. SMITH: 9 Q. Did you look at the Wu 2009 10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that  8 of your opinions in this case?  A. Let me just look at it just to make sure.  10 Q. I can't remember if I 21 attached that reference.  12 A. No.  13 A. No. 14 Statement comes from, whether it's 15 going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  19 Doctor? 20 A. Yes. 21 Doctor? 22 G. Did you rely on Merritt to form the basis of your opinions in this case?	7	aren't in front of her.	7	studies that you relied on in the basis
Q. Did you look at the Wu 2009  paper?  A. I did, and again, this is an  epidemiology paper. I'd have to look at  it again to see where the source of this  statement comes from, whether it's  reference to another study or whether  he's talking about specific things here  he's talking about specific things here  reduction as talc and endometriosis that he's  identified as variables.  Q. Quote, "Our findings on talc  and endometriosis are consistent with  previous findings and compatible with the  paper?  A. Let me just look at it just  to make sure.  Q. I can't remember if I  attached that reference.  A. No.  Q. I did your updated, but I'm  going to attach this as Exhibit 23, the  original key references and reliance  materials. I attached the amended one  earlier.  Doctor?  A. Yes.  Doctor?  A. Yes.  Doid you rely on Merritt to  form the basis of your opinions in this  take the just look at it just  to make sure.  A. No.  A. No.  A. No.  A. No.  14  Soing to attach this as Exhibit 23, the  original key references and reliance  materials. I attached the amended one  earlier.  Doctor?  A. Yes.  Q. Did you rely on Merritt to  form the basis of your opinions in this  case?	8	BY MR. SMITH:	8	of your opinions in this case?
10 paper? 11 A. I did, and again, this is an 12 epidemiology paper. I'd have to look at 13 it again to see where the source of this 14 statement comes from, whether it's 15 reference to another study or whether 16 he's talking about specific things here 17 such as talc and endometriosis that he's 18 identified as variables. 19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that 20 I did your updated, but I'm 21 attached this as Exhibit 23, the 22 original key references and reliance 23 the materials. I attached the amended one 24 previous findings on talc 25 form the basis of your opinions in this 26 case?	9	Q. Did you look at the Wu 2009	9	
A. I did, and again, this is an epidemiology paper. I'd have to look at it again to see where the source of this statement comes from, whether it's reference to another study or whether he's talking about specific things here such as talc and endometriosis that he's identified as variables.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Q. Quote, "Our findings on talc and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  20 I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?	10	· · · · · · · · · · · · · · · · · · ·	10	
tit again to see where the source of this tit again to see where the source of this statement comes from, whether it's reference to another study or whether he's talking about specific things here such as talc and endometriosis that he's identified as variables.  Q. Quote, "Our findings on talc Q. Quote, "Our findings on talc previous findings and compatible with the hypothesis that these factors increase tit again to see where the source of this A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier. Doctor? A. Yes. Q. Did you rely on Merritt to form the basis of your opinions in this case?	11	* *	11	Q. I can't remember if I
it again to see where the source of this statement comes from, whether it's reference to another study or whether he's talking about specific things here such as talc and endometriosis that he's identified as variables.  Q. Quote, "Our findings on talc previous findings and compatible with the provious findings and compatible with the hypothesis that these factors increase the first of ovarian cancer and that  A. No. Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes. Q. Did you rely on Merritt to form the basis of your opinions in this case?	12		12	
statement comes from, whether it's reference to another study or whether he's talking about specific things here such as talc and endometriosis that he's identified as variables.  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Q. Quote, "Our findings on talc and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  Q. I did your updated, but I'm going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes. Q. Did you rely on Merritt to form the basis of your opinions in this case?				
reference to another study or whether he's talking about specific things here such as talc and endometriosis that he's identified as variables.  Q. Quote, "Our findings on talc and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  going to attach this as Exhibit 23, the original key references and reliance materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?		•		
he's talking about specific things here such as talc and endometriosis that he's identified as variables.  Q. Quote, "Our findings on talc and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  16 original key references and reliance materials. I attached the amended one earlier.  19 Doctor? A. Yes. Q. Did you rely on Merritt to form the basis of your opinions in this case?				
such as talc and endometriosis that he's identified as variables.  Q. Quote, "Our findings on talc and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  materials. I attached the amended one earlier.  Doctor?  A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?		•		
18identified as variables.18earlier.19Q. Quote, "Our findings on talc19Doctor?20and endometriosis are consistent with20A. Yes.21previous findings and compatible with the21Q. Did you rely on Merritt to22hypothesis that these factors increase22form the basis of your opinions in this23the risk of ovarian cancer and that23case?				
19 Q. Quote, "Our findings on talc 20 and endometriosis are consistent with 21 previous findings and compatible with the 22 hypothesis that these factors increase 23 the risk of ovarian cancer and that 29 Doctor? A. Yes. 21 Q. Did you rely on Merritt to 22 form the basis of your opinions in this 23 case?				
and endometriosis are consistent with previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that  20 A. Yes.  Q. Did you rely on Merritt to form the basis of your opinions in this case?			l	
previous findings and compatible with the hypothesis that these factors increase the risk of ovarian cancer and that Q. Did you rely on Merritt to form the basis of your opinions in this case?				
hypothesis that these factors increase 22 form the basis of your opinions in this the risk of ovarian cancer and that 23 case?				
the risk of ovarian cancer and that 23 case?				
			l	
21 Inflammation may be a common patriway.			l	
l l		minamination may be a common patieway.		11. 110, 1 010 1101.

60 (Pages 234 to 237)

	Page 238		Page 240
1		1	
1	Q. And from that paper, quote,	1	only one, I think, compelling
2	"Chronic inflammation has been proposed	2	study that indicates that chronic
3	as a possible causal mechanism that	3	inflammation is not a causal
4	explains the observed association between	4	mechanism. Let me emphasize that
5	certain risk factors, such as the use of	5	I also have looked at the
6	talcum powder, talc, in the pelvic region	6	meta-analysis on pelvic
7	and epithelial ovarian cancer."	7	inflammatory disease that show
8	Would you agree or disagree	8	that this is not linked to ovarian
9	with that statement from Merritt?	9	cancer, as well as the data on
10	MR. FROST: Objection.	10	aspirin and NSAIDs.
11	THE WITNESS: I'd have to	11	BY MR. SMITH:
12	see the paper to see in which	12	Q. That wasn't my question
13	context it was used and also what	13	wasn't about whether it shows a causal
14	reference was supplied.	14	relationship. My question is, to you,
15	Again, I think the key word	15	are you of the opinion chronic
16	here is "possible." So I'm not	16	inflammation is a possible mechanism
17	aware that this paper presented	17	leading to the development of ovarian
18	any causative role or causative	18	cancer?
19	link between talcum powder and	19	MR. FROST: Objection to
20	ovarian cancer.	20	form.
21	BY MR. SMITH:	21	THE WITNESS: Well, yeah,
22	Q. Well, do you are you of	22	and as I said previously, the data
23	the opinion that chronic inflammation is	23	suggests that it is not a possible
24	a possible causal mechanism to ovarian	24	mechanism that leads to the
2 1	a possible causar meenamsiii to ovarian		incommism that reads to the
	Page 239		Page 241
1	cancer?	1	development of disease.
2	MR. FROST: Objection to	2	BY MR. SMITH:
3	form.	3	Q. Quote the next quote
4	THE WITNESS: I would argue	4	
		_	And you say that the data
5	against that based upon the	5	
5 6	against that based upon the literature that I reviewed. We	1	suggest that. What data are you talking
	literature that I reviewed. We	5	suggest that. What data are you talking about? What work? Is this an expert
6	literature that I reviewed. We can go into that later or we can	5 6 7	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report?
6 7	literature that I reviewed. We can go into that later or we can go into it now.	5 6	suggest that. What data are you talking about? What work? Is this an expert
6 7 8	literature that I reviewed. We can go into that later or we can go into it now. BY MR. SMITH:	5 6 7 8	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to
6 7 8 9 10	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you	5 6 7 8 9	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report?  MR. FROST: Objection to form.  THE WITNESS: No. As I
6 7 8 9 10 11	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible	5 6 7 8 9 10 11	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report?  MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one
6 7 8 9 10 11	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of	5 6 7 8 9 10 11 12	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report?  MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the
6 7 8 9 10 11 12 13	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?	5 6 7 8 9 10 11 12 13	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report?  MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own
6 7 8 9 10 11 12 13	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've	5 6 7 8 9 10 11 12 13 14	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise
6 7 8 9 10 11 12 13 14	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in	5 6 7 8 9 10 11 12 13 14 15	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report?  MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic
6 7 8 9 10 11 12 13 14 15 16	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.	5 6 7 8 9 10 11 12 13 14 15 16	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report?  MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.
6 7 8 9 10 11 12 13 14 15 16 17	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.  Q. Dr. Shih's work? Is that	5 6 7 8 9 10 11 12 13 14 15 16 17	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report?  MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.  Also the studies in animals
6 7 8 9 10 11 12 13 14 15 16 17	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.  Q. Dr. Shih's work? Is that the basis of your opinion that chronic	5 6 7 8 9 10 11 12 13 14 15 16 17 18	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.  Also the studies in animals indicate that there is no chronic
6 7 8 9 10 11 12 13 14 15 16 17 18	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.  Q. Dr. Shih's work? Is that the basis of your opinion that chronic inflammation is not a possible mechanism	5 6 7 8 9 10 11 12 13 14 15 16 17 18	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.  Also the studies in animals indicate that there is no chronic inflammation associated with
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.  Q. Dr. Shih's work? Is that the basis of your opinion that chronic inflammation is not a possible mechanism leading to the development of ovarian	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.  Also the studies in animals indicate that there is no chronic inflammation associated with disease development.
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.  Q. Dr. Shih's work? Is that the basis of your opinion that chronic inflammation is not a possible mechanism leading to the development of ovarian cancer?	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.  Also the studies in animals indicate that there is no chronic inflammation associated with disease development.  The pelvic inflammatory
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.  Q. Dr. Shih's work? Is that the basis of your opinion that chronic inflammation is not a possible mechanism leading to the development of ovarian cancer?  MR. FROST: Objection to	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.  Also the studies in animals indicate that there is no chronic inflammation associated with disease development.  The pelvic inflammatory disease literature and the
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.  Q. Dr. Shih's work? Is that the basis of your opinion that chronic inflammation is not a possible mechanism leading to the development of ovarian cancer?  MR. FROST: Objection to form.	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.  Also the studies in animals indicate that there is no chronic inflammation associated with disease development.  The pelvic inflammatory disease literature and the literature on aspirin and NSAIDs,
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	literature that I reviewed. We can go into that later or we can go into it now.  BY MR. SMITH:  Q. I'm just asking, do you think chronic inflammation is a possible mechanism leading to the development of ovarian cancer?  A. Not based upon what I've read or seen regarding Dr. Shih's work in this regard.  Q. Dr. Shih's work? Is that the basis of your opinion that chronic inflammation is not a possible mechanism leading to the development of ovarian cancer?  MR. FROST: Objection to	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	suggest that. What data are you talking about? What work? Is this an expert report? Is Shih an expert report? MR. FROST: Objection to form.  THE WITNESS: No. As I said, the Shih study is only one of many studies beginning at the cell level, indicating in my own work that talc does not give rise to genes that induce chronic inflammation.  Also the studies in animals indicate that there is no chronic inflammation associated with disease development.  The pelvic inflammatory disease literature and the

61 (Pages 238 to 241)

	Page 242		Page 244
1	directly and is compelling	1	And yes, it is a compelling study
2	evidence that chronic inflammation	2	showing that there is no
3	does not lead to the causation of	3	inflammation associated with early
4	ovarian cancers.	4	lesions in ovarian cancers.
5	BY MR. SMITH:	5	BY MR. SMITH:
6	Q. Where I'm looking on your	6	Q. It's not a study, ma'am.
7	reliance materials. Where is	7	It's an expert report. It's not peer
8	Dr. Shih's where is Dr. Shih listed on	8	reviewed, correct?
9	here?	9	MR. FROST: Objection.
10	A. Dr. Shih's study was one	10	THE WITNESS: I'm sorry. As
11	that I read after I compiled my opinions;	11	a pathologist, I looked at that
12	that is, my final report in this case.	12	data. It should be a
13	Q. When did you read that?	13	peer-reviewed report and maybe
14	A. I read that within the last	14	some day.
15	two weeks.	15	But the fact is, it was
16	Q. Well, you provided me an	16	beautifully done and it was
17	updated list of materials relied upon.	17	compelling data showing that
18	It's not in that.	18	inflammation is not associated
19	A. It should have been.	19	with early intraepithelial
20	Q. Is it?	20	development in serous types of
21	A. Yes.	21	cancers.
22	MR. FROST: It should be.	22	BY MR. SMITH:
23 24	BY MR. SMITH:	23 24	Q. Ma'am, one day I might be
24	Q. I see. It says "Expert	24	president of the United States.
	Page 243		Page 245
1	report of Shih."	1	My question to you is, is
2	A. That's what I'm talking	2	that a peer-reviewed publication?
3	about.	3	MR. FROST: Objection to
4	Q. That's a defense expert	4	form.
5	report?	5	THE WITNESS: As I read it,
6	A. That's correct.	6	no. But I'm sure it will be some
7	Q. So one of the major bases of	7	day.
8	whether talc can cause chronic	8	BY MR. SMITH:
9	inflammation that could possibly lead to	9	Q. Okay. What do you base your
10	the development of ovarian cancer, one of	10	opinion on, "I'm sure it will be some
11	your major reliance materials is an	11	day"? What do you base that on?
12	expert report for the defendants in this	12	MR. FROST: Objection.
13	litigation?	13	THE WITNESS: Dr. Shih is an
14	MR. FROST: Objection.	14	international expert in this
15	THE WITNESS: That's not	15	field. A leading pathologist in
16 17	what I said.	16	this field. And, therefore, this
17	BY MR. SMITH:	17	study is at a high I would call
18	Q. You said it was a compelling	18	it a highly ranked, thorough study
19	study that you relied upon for that	19	done beautifully by leading
20	opinion.	20	pathologists in this field.
21 22	MR. FROST: Objection.	21 22	BY MR. SMITH:
23	THE WITNESS: It bolstered	22	Q. All those accolades gave
23 24	my preexisting opinions written in my report before I saw the study.	23	by given by another defense expert being paid in this litigation, correct?
<u> </u>	my report octore I saw the study.	47	oonig paid in tins nugation, correct!

62 (Pages 242 to 245)

		<u> </u>	
	Page 246		Page 248
1	MR. FROST: Objection to	1	BY MR. SMITH:
2	form.	2	Q. Studied the field of talc
3	THE WITNESS: I am not	3	and ovarian cancer for 40 years?
4	certain to whether how much he or	4	A. No.
5	she is being paid. I'm not	5	MR. FROST: Objection.
6	looking at the report as a report,	6	THE WITNESS: Who studied
7	per se. I'm looking at the data	7	the field of ovarian cancer most
8	and assessing it scientifically,	8	recently. But who has done
9	and it is compelling data.	9	research on development of
10	BY MR. SMITH:	10	epithelial cancers in the cervix,
11	Q. I meant all the accolades	11	
12	•	12	in the skin, and in the lung. BY MR. SMITH:
	that you're throwing on this expert	13	
13	report are by you, who is a defense paid	l	Q. That's not what we are
14	expert and been in talc litigation since	14	about. We're talking about ovarian
15	2014; is that correct, Dr. Mossman?	15	cancer. I'm not talking about the cervix
16	A. No, it's	16	or the lung I'm not talking about
17	MR. FROST: Objection	17	cervical cancer.
18	BY MR. SMITH:	18	Do you understand that? I'm
19	Q. That's not correct? Let's	19	talking about ovarian cancer.
20	break it down then.	20	MR. FROST: Objection to
21	A. No, let let me finish.	21	form.
22	Q. Okay.	22	THE WITNESS: What I'm
23	A. I'm not talking as an expert	23	saying is that inflammation is
24	for defense in litigation. I'm talking	24	inflammation regardless of the
	Page 247		Page 249
1		1	
1 2	as a pathologist in the study of science.	2	cancer that you're talking about. BY MR. SMITH:
	This was a scientific study,		
3	and it was done correctly and it is very	3	Q. So inflammation is
4	important in terms of bolstering my	4	inflammation.
5	opinions which were linked to other	5	A. What I'm saying here is that
6	things prior to my seeing the Shih study.	6	there is no evidence that chronic
7	Q. Ma'am, it's an expert	7	inflammation is associated with the
8	report. Your reliance materials have you	8	causation or early development of ovarian
9	here as a paid expert for Johnson &	9	cancers.
10	Johnson who is a defendant in the	10	Q. You have not performed one
11	litigation. You've been paid for talc	11	study on cosmetic-grade talc, correct?
12	litigation since 2014. So your opinions	12	A. I have said that before,
13	and your reliance materials and your	13	yes.
14	opinion in this case is for litigation.	14	Q. You have not performed one
15	Do you not understand that?	15	study on Shower to Shower or Baby Powder
16	MR. FROST: Objection to	16	which are the products at issue in this
17	form.	17	case, correct?
18	THE WITNESS: Yes. And I	18	MR. FROST: Objection to
19	think you are incorrect. My	19	form.
20	opinions are not as expert in	20	THE WITNESS: As I
21	litigation.	21	emphasize, I have looked at
22	My opinions are as a	22	industrial tales
23	scientist who has studied this	23	BY MR. SMITH:
24	field for 40 years.	24	Q. No, ma'am. That's not
	11010 101 10 yours.		×. 1.0, 111 1111 11111 1101

63 (Pages 246 to 249)

	Page 250		Page 252
1	responsive to my question.	1	ovarian cancer."
2	My question is, have you	2	Would you agree or disagree
3	performed any studies on Baby Powder and	3	with that statement from Merritt?
4	Shower to Shower that are at issue in	4	MR. FROST: Objection.
5	this litigation?	5	THE WITNESS: I don't have
6	MR. FROST: Objection to	6	it in front of me. I I really
7	form.	7	can't comment on it.
8	THE WITNESS: I have not	8	BY MR. SMITH:
9	myself performed studies.	9	Q. You can't comment on that
10	BY MR. SMITH:	10	quote, whether you agree with that
11	Q. And have you performed	11	statement or not?
12		12	
13	studies on the types of asbestos that		A. Which one was this now? The
	experts have found and internal documents	13	chronic inflammation again?
14	have revealed from Johnson & Johnson and	14	Q. It's the second one.
15	Imerys that are in Baby Powder and Shower	15	"Chronic inflammation was first invoked
16	to Shower?	16	as a possible mechanism leading to the
17	MR. FROST: Objection.	17	development of epithelial ovarian cancer
18	THE WITNESS: Again, I've	18	to explain observed associations between
19	looked at tale, fibrous tale,	19	certain factors such as talcum powder in
20	which contained non-asbestiform	20	the perineal region or pelvic
21	tremolite. And I'm unaware of	21	inflammatory disease, PID, and a risk of
22	scientific data supporting the	22	ovarian cancer."
23	claims that tremolite,	23	Do you agree or disagree
24	anthophyllite, or actinolite	24	with that statement?
	Page 251		
	Page 231		Page 253
1		1	
1	asbestos are in talcs.	1	MR. FROST: Objection to
2	asbestos are in talcs.  MR. SMITH: Object to	2	MR. FROST: Objection to form.
2 3	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.	2 3	MR. FROST: Objection to form.  THE WITNESS: I disagree
2 3 4	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness. BY MR. SMITH:	2 3 4	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.
2 3 4 5	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you	2 3 4 5	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement. BY MR. SMITH:
2 3 4 5 6	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH: Q. My question is, have you ever performed a study on the types of	2 3 4 5 6	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH:  Q. Thank you.
2 3 4 5 6 7	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier	2 3 4 5 6 7	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you.  Next Merritt quote:
2 3 4 5 6 7 8	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal	2 3 4 5 6 7 8	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence
2 3 4 5 6 7 8	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys	2 3 4 5 6 7 8 9	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer
2 3 4 5 6 7 8 9	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH: Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to	2 3 4 5 6 7 8 9	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the
2 3 4 5 6 7 8 9 10	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested	2 3 4 5 6 7 8 9 10 11	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases
2 3 4 5 6 7 8 9 10 11 12	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?	2 3 4 5 6 7 8 9 10 11 12	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."
2 3 4 5 6 7 8 9 10 11 12 13	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection.	2 3 4 5 6 7 8 9 10 11 12 13	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree
2 3 4 5 6 7 8 9 10 11 12 13 14	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH: Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection. THE WITNESS: I have not.	2 3 4 5 6 7 8 9 10 11 12 13 14	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree with that statement from Merritt?
2 3 4 5 6 7 8 9 10 11 12 13 14	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection.  THE WITNESS: I have not.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree with that statement from Merritt?  MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection.  THE WITNESS: I have not.  BY MR. SMITH: Q. Okay. In the Merritt	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree with that statement from Merritt?  MR. FROST: Objection. THE WITNESS: Again, I'd
2 3 4 5 6 7 8 9 10 11 12 13 14	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection. THE WITNESS: I have not.  BY MR. SMITH: Q. Okay. In the Merritt another Merritt quote here. "Chronic	2 3 4 5 6 7 8 9 10 11 12 13 14 15	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree with that statement from Merritt?  MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection.  THE WITNESS: I have not.  BY MR. SMITH:  Q. Okay. In the Merritt another Merritt quote here. "Chronic inflammation was first invoked as a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree with that statement from Merritt?  MR. FROST: Objection. THE WITNESS: Again, I'd
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection. THE WITNESS: I have not.  BY MR. SMITH: Q. Okay. In the Merritt another Merritt quote here. "Chronic	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree with that statement from Merritt?  MR. FROST: Objection. THE WITNESS: Again, I'd have to see the report and see the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection.  THE WITNESS: I have not.  BY MR. SMITH:  Q. Okay. In the Merritt another Merritt quote here. "Chronic inflammation was first invoked as a	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree with that statement from Merritt? MR. FROST: Objection. THE WITNESS: Again, I'd have to see the report and see the references, but the references
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection.  THE WITNESS: I have not.  BY MR. SMITH:  Q. Okay. In the Merritt another Merritt quote here. "Chronic inflammation was first invoked as a possible mechanism leading to the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk."  Would you agree or disagree with that statement from Merritt?  MR. FROST: Objection. THE WITNESS: Again, I'd have to see the report and see the references, but the references that I have reviewed suggest that
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection.  THE WITNESS: I have not.  BY MR. SMITH:  Q. Okay. In the Merritt another Merritt quote here. "Chronic inflammation was first invoked as a possible mechanism leading to the development of epithelial ovarian cancer	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk." Would you agree or disagree with that statement from Merritt? MR. FROST: Objection. THE WITNESS: Again, I'd have to see the report and see the references, but the references that I have reviewed suggest that this is not consistent evidence at
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection. THE WITNESS: I have not.  BY MR. SMITH:  Q. Okay. In the Merritt another Merritt quote here. "Chronic inflammation was first invoked as a possible mechanism leading to the development of epithelial ovarian cancer to explain observed associations between certain factors such as talcum powder in	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk." Would you agree or disagree with that statement from Merritt? MR. FROST: Objection. THE WITNESS: Again, I'd have to see the report and see the references, but the references that I have reviewed suggest that this is not consistent evidence at all.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	asbestos are in talcs.  MR. SMITH: Object to nonresponsiveness.  BY MR. SMITH:  Q. My question is, have you ever performed a study on the types of asbestos that we went through earlier that have been found in the internal documents of Johnson & Johnson and Imerys that are in Baby Powder and Shower to Shower and by experts that have tested Baby Powder bottles?  MR. FROST: Objection.  THE WITNESS: I have not.  BY MR. SMITH:  Q. Okay. In the Merritt another Merritt quote here. "Chronic inflammation was first invoked as a possible mechanism leading to the development of epithelial ovarian cancer to explain observed associations between	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. FROST: Objection to form.  THE WITNESS: I disagree with the statement.  BY MR. SMITH: Q. Thank you. Next Merritt quote:  "Indeed, the most consistent evidence linking inflammation with ovarian cancer comes from many reports that use of the talc in the perineal region increases ovarian cancer risk." Would you agree or disagree with that statement from Merritt? MR. FROST: Objection. THE WITNESS: Again, I'd have to see the report and see the references, but the references that I have reviewed suggest that this is not consistent evidence at all.

64 (Pages 250 to 253)

	Page 254		Page 256
1	of your opinion in this case?	1	I believe that no normal ovarian
2	A. It was one of the cohort	2	cells treated with talc undergo
3	studies I believe.	3	increased cell proliferation,
4	Q. She has several.	4	neoplastic transformation, and
5	A. I'd have to see the	5	generation of reactive oxygen
6	publication.	6	species.
7	Do you have it?	7	She may be referencing
8	MR. FROST: Reliance list.	8	another study which by
9	Did you check your reliance list?	9	Buz'Zard, et al., that encompasses
10	THE WITNESS: I mean, I have	10	these ideas.
11	to see the publication itself.	11	BY MR. SMITH:
12	MR. FROST: Sure.	12	Q. I'm going to have to look
13	MR. SMITH: I'll get that at	13	at the screen now. I just don't have
14	a break. Yeah, I'll get that at a	14	I don't know what happened with the I
15	break. Let me see if I can find	15	apologize.
16	it real quick. If not, I'll move	16	Did you rely on Langseth
17	on. I'll come back to it.	17	2008 for the basis of your opinions in
18	BY MR. SMITH:	18	this case?
19	Q. But, quote, "Talc particles	19	A. I did. It was an
20	can induce an inflammatory response in	20	epidemiological study. Again, the
21	vivo which may be important" what's	21	hypothesis, mechanism of carcinogenicity
22	"in vivo" mean?	22	may be related to inflammation. He
23	A. It means in the body.	23	didn't look at inflammation, but it's a
24	Q. "Talc particles can induce	24	hypothesis that he put forth.
	Page 255		Page 257
1	an inflammatory response in vivo."	1	Q. Do you believe it's a
2	Do you agree with that?	2	possible hypothesis?
3	MR. FROST: Objection to	3	MR. FROST: Objection to
4	form.	4	form.
5	THE WITNESS: I believe we	5	THE WITNESS: Based upon my
6	talked about that with talc	6	studies with talc, no. Because in
7	pleurodesis, yes.	7	ovarian epithelial cells and
8	BY MR. SMITH:	8	certainly in pleural I should
9	Q "which may be important	9	say peritoneal mesothelial cells
10	in ovarian cancer risk. Normal ovarian	10	we documented antiinflammatory
11	cells treated with talc are more likely	11	effects of talc. So it's
12	to undergo cell proliferation and	12	difficult for me to reconcile my
13	neoplastic transformation, and cellular	13	findings with this statement.
14	generation of reactive oxygen species	14	BY MR. SMITH:
15	increases with increasing exposure to	15	Q. Collectively well, let me
16	talc."	16	ask you this. Did you read the Mills
17	Do you agree with that	17	2004 paper as reliance for your opinions
18	statement from Gates?	18	in this case?
19	MR. FROST: Objection to	19	A. Let me look here and see
20	form.	20	whether I did read it.
21	THE WITNESS: Gates did not	21	No, I am uncertain what that
		2.0	•
22	show that in this publication. I	22	is.
22 23	show that in this publication. I do remember the statement. And I	23	I believe it might be an
22	show that in this publication. I	1	

65 (Pages 254 to 257)

	Page 258		Page 260
1	a bell.	1	time in the literature.
2	Q. You don't have it as your	2	Q. It says, "At the same time,
3	reliance materials for the basis of your	3	a growing body of epidemiological
4	opinion in this case; is that correct?	4	evidence suggest that factors calling
5	A. No, it's not listed.	5	epithelial inflammation are involved in
6	Q. "Collectively, these studies	6	ovarian carcinogenesis. Such factors
7	point to a possible etiologic role of	7	include asbestos and tale exposures,
8	talc in ovarian cancer via an	8	endometriosis, and pelvic inflammatory
9	inflammatory process at the site of the	9	disease."
10	ovarian epithelium."	10	I take it that you don't
11	Would you agree or disagree	11	agree with that statement of Ness in
12	with that statement from Mills?	12	•
13		13	1999?
14	MR. FROST: Objection to	14	MR. FROST: Objection to form.
	form.		101111
15	THE WITNESS: Yeah, I would	15	THE WITNESS: I don't. I
16	disagree that that has not been	16	don't agree with "such factors
17	shown.	17	include." Maybe they were at the
18	BY MR. SMITH:	18	time. But there have been a lot
19	Q. Have you read the Ness 2000	19	of papers published since then
20	study?	20	that suggest the opposite.
21	A. I have. These are all	21	BY MR. SMITH:
22	hypotheses generating.	22	Q. Same study. "Inflammation
23	I believe some of them are	23	by its nature produces toxic oxidants
24	reviews of the field as well.	24	meant to kill pathogens. These oxidants
	Page 259		Page 261
1	Q. Quote, "Inflammation	1	cause direct damage to DNA, proteins, and
2	involves rapid cell division, DNA	2	lipids and may, therefore, play a role in
3	excision and repair, oxidative stress,	3	direct carcinogenesis."
4	and high concentrations of cytokines	4	Do you agree with that
5	and light concentrations of cytokines	5	statement?
6	A. Prostaglandins.	6	MR. FROST: Objection.
7	C	7	THE WITNESS: Again, it's a
	Q. I'm glad you pronounced it.		G ,
8	"all of which are	8	general statement with regard to
9	established promoters of mutagenesis."	9 10	inflammation in general. I don't
10	Would you agree with that	11	agree with it as it's been
11	statement?		shown has not been shown to be
12	MR. FROST: Objection.	12	important in ovarian cancer
1 2		13	development.
13	THE WITNESS: In a general		
14	context, yes. But it certainly	14	BY MR. SMITH:
14 15	context, yes. But it certainly hasn't been shown for talc,	14 15	BY MR. SMITH: Q. Same study. "Direct
14 15 16	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce	14 15 16	BY MR. SMITH: Q. Same study. "Direct induction of inflammation as a result of
14 15 16 17	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce mutations.	14 15 16 17	BY MR. SMITH: Q. Same study. "Direct induction of inflammation as a result of endometriosis, talc and asbestos exposure
14 15 16 17 18	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce mutations.  BY MR. SMITH:	14 15 16 17 18	BY MR. SMITH:  Q. Same study. "Direct induction of inflammation as a result of endometriosis, talc and asbestos exposure and PID, as well as ovulation itself, may
14 15 16 17 18 19	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce mutations.  BY MR. SMITH: Q. Have you relied on Ness 1999	14 15 16 17 18 19	BY MR. SMITH:  Q. Same study. "Direct induction of inflammation as a result of endometriosis, talc and asbestos exposure and PID, as well as ovulation itself, may act to promote ovarian tumorigenesis."
14 15 16 17 18 19 20	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce mutations.  BY MR. SMITH: Q. Have you relied on Ness 1999 in forming the basis of your opinions in	14 15 16 17 18 19 20	BY MR. SMITH:  Q. Same study. "Direct induction of inflammation as a result of endometriosis, talc and asbestos exposure and PID, as well as ovulation itself, may act to promote ovarian tumorigenesis."  Do you agree with that
14 15 16 17 18 19 20 21	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce mutations.  BY MR. SMITH: Q. Have you relied on Ness 1999 in forming the basis of your opinions in this case?	14 15 16 17 18 19 20 21	BY MR. SMITH:  Q. Same study. "Direct induction of inflammation as a result of endometriosis, talc and asbestos exposure and PID, as well as ovulation itself, may act to promote ovarian tumorigenesis."  Do you agree with that statement from Ness?
14 15 16 17 18 19 20 21	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce mutations.  BY MR. SMITH: Q. Have you relied on Ness 1999 in forming the basis of your opinions in this case? A. Yes. It's somewhat	14 15 16 17 18 19 20 21 22	BY MR. SMITH:  Q. Same study. "Direct induction of inflammation as a result of endometriosis, talc and asbestos exposure and PID, as well as ovulation itself, may act to promote ovarian tumorigenesis."  Do you agree with that statement from Ness?  MR. FROST: Objection.
14 15 16 17 18 19 20 21	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce mutations.  BY MR. SMITH: Q. Have you relied on Ness 1999 in forming the basis of your opinions in this case?	14 15 16 17 18 19 20 21	BY MR. SMITH:  Q. Same study. "Direct induction of inflammation as a result of endometriosis, talc and asbestos exposure and PID, as well as ovulation itself, may act to promote ovarian tumorigenesis."  Do you agree with that statement from Ness?
14 15 16 17 18 19 20 21	context, yes. But it certainly hasn't been shown for talc, because talc doesn't induce mutations.  BY MR. SMITH: Q. Have you relied on Ness 1999 in forming the basis of your opinions in this case? A. Yes. It's somewhat	14 15 16 17 18 19 20 21 22	BY MR. SMITH:  Q. Same study. "Direct induction of inflammation as a result of endometriosis, talc and asbestos exposure and PID, as well as ovulation itself, may act to promote ovarian tumorigenesis."  Do you agree with that statement from Ness?  MR. FROST: Objection.

66 (Pages 258 to 261)

	Page 262		Page 264
1	evaluated these studies that don't	1	stapled.
2	support that mechanism of action.	2	(Document marked for
3	BY MR. SMITH:	3	identification as Exhibit
4	Q. Same study. "We have	4	Mossman-25.)
5	reviewed the data suggesting that an	5	BY MR. SMITH:
6	additional mechanism that may underlie	6	Q. All right. Exhibit 25, this
7	ovarian cancer is inflammation with	7	is a paper that was published in 2009.
8	concomitant rapid DNA turnover and	8	Do you see that, Doctor? "Inflammation:
9	defective repair."	9	A Hidden Path to Breaking the Spell of
10	Do you agree or disagree	10	Ovarian Cancer."
11	with that statement?	11	Do you see that?
12	MR. FROST: Objection.	12	A. Yes. I am not familiar with
13	THE WITNESS: Again, I it	13	the journal Cell Cycle, but
14	may have been true in 1999, but	14	Q. By Shan and Liu.
15	data do not support that as a	15	And if you turn to the next
16	whole.	16	page well, let me ask you this. Is
17	BY MR. SMITH:	17	this on your reference materials that
18	Q. Okay. Well, let's talk	18	form the basis of your opinion in this
19	about data that might be more relevant.	19	case?
20	And you would agree that this is	20	A. No. And I'm unfamiliar with
21	epidemiological data that we have gone	21	the journal. So I'm not sure it would
22	through regarding the inflammation that's	22	have been referenced by PubMed or my
23	on Exhibit 24, correct?	23	PubMed searches.
24	MR. FROST: Objection.	24	Q. Okay. Well, let's go to the
24	MR. PROST. Objection.	24	Q. Okay. Well, let's go to the
	Page 263		Page 265
1	THE WITNESS: I would agree,	1	first page. "Inflammation: A hidden
2	I'm sorry. Was that a question?	2	path to breaking the spell of ovarian
3	BY MR. SMITH:	3	cancer." Shan and Liu, the authors from
4	Q. Been dealing with	4	the department of pathology at the
5	epidemiological studies?	5	University of Texas M.D. Anderson Cancer
6	A. Have we talked about them?	6	Center, Houston, Texas.
7	Q. Yes.	7	Is M.D. Anderson Cancer
8	A. Yes, we have.	8	Center in Houston, Texas, a reputable
9	Q. Excuse me. That are	9	cancer center in the United States and
10	included in Exhibit 24 that we went	10	throughout the world?
11	through all the quotes. Those are	11	MR. FROST: Objection.
12	epidemiological studies that we went	12	THE WITNESS: It is.
13	through, correct?	13	BY MR. SMITH:
14	MR. FROST: Objection.	14	Q. Let's go to the first
15	THE WITNESS: The majority	15	let's go to the box, grey box to the left
16	of these are epidemiology studies,	16	above introduction. "Epithelial ovarian
17	yes, with the exception of the	17	cancer is a highly lethal gynecological
18	Trabert study.	18	cancer for which overall prognosis has
19	MR. FROST: Are these two	19	remained poor over the past few decades.
20	different ones?	20	A number of theories have been postulated
21	MR. SMITH: No.	21	in an effort to explain the etiology of
22	MR. FROST: Okay.	22	epithelial ovarian cancer each of which
23	MR. SMITH: Same one.	23	has been both applauded and doubted. Of
24	MR. FROST: Just not	24	note, these theories likely are not
			•

67 (Pages 262 to 265)

	Page 266		Page 268
1	mutually exclusive as they all converge	1	Q. Sure.
2	more or less on the role of inflammation	2	A uncover where
3	in promoting ovarian tumorigenesis."	3	Q. We're going to go through
4	Do you agree with that	4	it. We're going to go through it.
5	statement?	5	A. Okay.
6	MR. FROST: Objection.	6	Q. All right.
7	THE WITNESS: Yes. That the	7	Introduction. "Epithelial
8	inflammation certainly has been	8	ovarian cancer, EOC, is the most common
9	shown to be important in late	9	subgroup of ovarian cancer. It's the
10	stage cancers, including ovarian.	10	deadliest gynecological cancer in the
11	BY MR. SMITH:	11	United States, accounting for more deaths
12	Q. That's not what it says,	12	than all other gynecological cancers
13	Doctor. It says, "Of note, these	13	combined."
14	theories are likely not mutually	14	
15		1	And we went through that
16	exclusive as they all converge more or	15	earlier, correct?
	less on the role of inflammation in	16	A. Yes.
17	promoting ovarian tumorigenesis,"	17	Q. "The high mortality rate for
18	correct?	18	epithelial ovarian cancer is a result of
19	A. Correct.	19	technical obstacles to early detection of
20	Q. Okay.	20	the disease, a high prevalence of distal
21	A. And promotion is not	21	metastasis at late stages of the
22	initiation or causation.	22	disease" and that's in 70 percent of
23	Q. I understand.	23	the cases it said.
24	A. So that's what I stated.	24	"This latter property is
	Page 267		Page 269
1	That in general,	1	probably attributable to the unique
2	inflammation has been linked to the	2	peritoneal environment of the epithelial
3	progression as well as the dissemination	3	ovarian cancer which facilitates
4	of preexisting tumors.	4	convenient seating of ovarian cancer
5	Q. Okay. Let me continue. "In	5	cells in the peritoneal cavity, which is
6	this review we describe the latest	6	further aided by the constant flow of
7	studies on the role of inflammation in	7	peritoneal fluid."
8	the initiation and progression of	8	Were you aware of that
9	epithelial ovarian cancer from three	9	statement prior to us reading it?
10	major aspects: Physiologic functions of	10	A. Could you refer you're
11	a normal ovary, potential involvement of	11	going a little fast. I'm just wondering
12	the fallopian tube in the initiation of	12	
13		13	where you are.
1.5	epithelial ovarian cancer, and the strong		Q. I'm at introduction.
	imme at af a ally law maions any imamma ant an	1 1 1	A Olasa
14	impact of cellular microenvironment on	14	A. Okay.
14 15	the development of disease."	15	Q. And I'm about six lines
14 15 16	the development of disease."  Now, that statement doesn't	15 16	Q. And I'm about six lines down, "This latter property is probably
14 15 16 17	the development of disease."  Now, that statement doesn't just say progression. It says	15 16 17	Q. And I'm about six lines down, "This latter property is probably attributable."
14 15 16 17 18	the development of disease."  Now, that statement doesn't just say progression. It says initiation, correct?	15 16 17 18	Q. And I'm about six lines down, "This latter property is probably attributable."  Do you see that?
14 15 16 17 18 19	the development of disease."  Now, that statement doesn't just say progression. It says initiation, correct?  MR. FROST: Objection.	15 16 17 18 19	Q. And I'm about six lines down, "This latter property is probably attributable."  Do you see that?  A. The first paragraph?
14 15 16 17 18 19 20	the development of disease."  Now, that statement doesn't just say progression. It says initiation, correct?  MR. FROST: Objection.  THE WITNESS: We describe	15 16 17 18 19 20	Q. And I'm about six lines down, "This latter property is probably attributable."  Do you see that?  A. The first paragraph?  Q. Under introduction.
14 15 16 17 18 19 20 21	the development of disease."  Now, that statement doesn't just say progression. It says initiation, correct?  MR. FROST: Objection.  THE WITNESS: We describe the latest studies on the role of	15 16 17 18 19 20 21	Q. And I'm about six lines down, "This latter property is probably attributable."  Do you see that?  A. The first paragraph?  Q. Under introduction.  A. Yep.
14 15 16 17 18 19 20 21	the development of disease."  Now, that statement doesn't just say progression. It says initiation, correct?  MR. FROST: Objection.  THE WITNESS: We describe the latest studies on the role of inflammation initiation. I'd	15 16 17 18 19 20 21 22	Q. And I'm about six lines down, "This latter property is probably attributable."  Do you see that?  A. The first paragraph?  Q. Under introduction.  A. Yep.  Q. It's after "70 percent of
14 15 16 17 18 19 20 21 22 23	the development of disease."  Now, that statement doesn't just say progression. It says initiation, correct?  MR. FROST: Objection.  THE WITNESS: We describe the latest studies on the role of inflammation initiation. I'd like I'd have to read this	15 16 17 18 19 20 21 22 23	Q. And I'm about six lines down, "This latter property is probably attributable."  Do you see that?  A. The first paragraph?  Q. Under introduction.  A. Yep.  Q. It's after "70 percent of the cases."
14 15 16 17 18 19 20 21	the development of disease."  Now, that statement doesn't just say progression. It says initiation, correct?  MR. FROST: Objection.  THE WITNESS: We describe the latest studies on the role of inflammation initiation. I'd	15 16 17 18 19 20 21 22	Q. And I'm about six lines down, "This latter property is probably attributable."  Do you see that?  A. The first paragraph?  Q. Under introduction.  A. Yep.  Q. It's after "70 percent of

68 (Pages 266 to 269)

	Page 270		Page 272
1	environment of peritoneal the	1	trends.
2	peritoneal environment being unique for	2	So I think the word unique
3	epithelial ovarian cancer which	3	peritoneal environment is of
4	facilitates convenient seating of ovarian	4	question to me. I don't know why
5	cancer cells in the peritoneal cavity,	5	it would be unique.
6	which is further aided by constant flow	6	BY MR. SMITH:
7	of peritoneal fluid."	7	Q. Okay. "We call particular
8	Were you aware of that	8	attention to this 'open' environment to
9	statement prior to us reading that now?	9	which epithelial ovarian cancer is
10	MR. FROST: Objection to	10	exposed because it has resulted in a
11	form.	11	myriad of characteristics specific to
12	THE WITNESS: Yeah. I'm	12	epithelial ovarian cancer such as ease of
13	still lost in where you are here,	13	widespread cancer metastases"
14	and whether there are references	14	"metastases in short period of time,
15	to that statement.	15	unique formation of ascites, and high
16	BY MR. SMITH:	16	susceptibility of the ovarian surface
17	Q. Ma'am. Ma'am. I'm in	17	epithelium or OSE to peritoneal
18	introduction.	18	inflammatory stimuli."
19	A. Gotcha.	19	A. Again, I think by open
20	Q. On the first page.	20	environment they are talking about the
21	À. Okay.	21	peritoneum as a cavity with fluids in it.
22	Q. Do you see, one, two, three,	22	I don't recall nor have I seen papers
23	four, five, six, seven lines down, you	23	suggesting that there is high
24	see 70 percent of cases right there?	24	susceptibility of ovarian epithelial to
	Page 271		Page 273
1	Do you see 70 percent?	1	peritoneal inflammatory stimuli.
2	A. Yes.	2	Again, this is a not
3	Q. I'm reading the line right	3	not a paper with original results. It's
4	after that. "This latter property is	4	a hypothesis paper. I don't see any data
5	probably attributable to the unique	5	here supporting that, or any data at all
6	peritoneal environment of epithelial	6	in this manuscript other than a figure
7	ovarian cancer which facilitates	7	entitled, "Potential sources of
8	convenient seating of ovarian cancer	8	inflammatory stimuli."
9	cells in the peritoneal cavity, which is	9	Q. Go to the next page, please.
10	further aided by the constant flow of	10	A. Mm-hmm.
11	peritoneal fluid."	11	Q. If you look down at the
12	Were you aware of that fact	12	bottom right. "Inflammation: Cellular
13	before we read it just now?	13	senescence in ovarian epithelial
14	MR. FROST: Objection.	14	microenvironment and ovarian cancer."
15	THE WITNESS: I was aware of	15	"As described above the
	the importance of tumor	16	complex biology of OSE," which is ovarian
16	*	1	0 1.1 11 11 11 1
16 17	microenvironment on dissemination	17	surface epithelium, "makes ovarian
16 17 18	microenvironment on dissemination of preexisting cancers. I'm not	18	epithelial cells exceedingly sensitive to
16 17 18 19	microenvironment on dissemination of preexisting cancers. I'm not sure whether how unique a	18 19	epithelial cells exceedingly sensitive to peritoneal inflammatory agents."
16 17 18 19 20	microenvironment on dissemination of preexisting cancers. I'm not sure whether how unique a peritoneal environment is. Since	18 19 20	epithelial cells exceedingly sensitive to peritoneal inflammatory agents."  And they talk about the open
16 17 18 19 20 21	microenvironment on dissemination of preexisting cancers. I'm not sure whether how unique a peritoneal environment is. Since we have looked at the environment	18 19 20 21	epithelial cells exceedingly sensitive to peritoneal inflammatory agents."  And they talk about the open system on the page we read just before
16 17 18 19 20 21	microenvironment on dissemination of preexisting cancers. I'm not sure whether how unique a peritoneal environment is. Since we have looked at the environment of the peritoneum and the lung in	18 19 20 21 22	epithelial cells exceedingly sensitive to peritoneal inflammatory agents."  And they talk about the open system on the page we read just before that. Do you recall that?
16 17 18 19 20 21	microenvironment on dissemination of preexisting cancers. I'm not sure whether how unique a peritoneal environment is. Since we have looked at the environment	18 19 20 21	epithelial cells exceedingly sensitive to peritoneal inflammatory agents."  And they talk about the open system on the page we read just before

69 (Pages 270 to 273)

	Page 274		Page 276
1	Figure 1, "Potential sources of	1	been described as one enriched with a
2	inflammatory stimuli." And there's no	2	broad spectrum pro-inflammatory cytokines
3	data to support this hypothesis in the	3	and chemokines. Increasing evidence
4	paper.	4	suggests that inflammation contributes
5	Q. It doesn't say hypothesis	5	significantly to the etiology of
6	anywhere, does it, Doctor?	6	epithelial ovarian cancer."
7	MR. FROST: Objection.	7	What does "etiology" mean?
8	THE WITNESS: This is a	8	A. Basically the process of
9	hypothesis paper. There's no data	9	disease.
10	in it. This is a figure that they	10	Again, there's no references
11	have drawn, a schematic in which	11	to support this. So I'm not sure what he
12	they are hypothesizing that there	12	means by etiology. It's a very broad
13	is inflammatory stimuli in the	13	term.
14	peritoneal fluids.	14	Q. Okay. Let's go to hold
15	So I'm unclear as to the	15	on a second. Bear with me just a second.
16	data. I think it's an intriguing	16	Man, they did a weird way of
17	hypothesis. But as I emphasized	17	copying this stuff down there. I mean,
18	previously, it hasn't been borne	18	you talking about I couldn't figure it
19	out in the last decade.	19	out. It all just came to me. And I just
20	BY MR. SMITH:	20	can't believe what I'm seeing. But
21	Q. Okay. Let's look at Figure	21	anyway, we'll get it straight.
22	1. It has at the bottom right. It	22	MR. FROST: Is this one
23	has, "Peritoneal inflammatory stimuli,	23	copy?
24	initiation of premalignant ovarian	24	MR. SMITH: Yeah, I'm
			,
	Page 275		Page 277
1	epithelial cells, senescent fibroblasts,	1	catting mades to hand it to you
		1	getting ready to hand it to you
2	inflammatory cells, and capillaries."	2	now.
2 3	inflammatory cells, and capillaries."  Do you see that diagram in		
		2	now.
3	Do you see that diagram in	2 3	now. (Document marked for
3 4	Do you see that diagram in Figure C?	2 3 4	now. (Document marked for identification as Exhibit
3 4 5	Do you see that diagram in Figure C? A. Yes.	2 3 4 5	now. (Document marked for identification as Exhibit Mossman-26.)
3 4 5 6	Do you see that diagram in Figure C? A. Yes. Q. And it says under Figure 1,	2 3 4 5 6	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was
3 4 5 6 7	Do you see that diagram in Figure C? A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory	2 3 4 5 6 7	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)
3 4 5 6 7 8	Do you see that diagram in Figure C? A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the	2 3 4 5 6 7 8	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:
3 4 5 6 7 8 9	Do you see that diagram in Figure C? A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of	2 3 4 5 6 7 8 9 10	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a
3 4 5 6 7 8 9 10 11	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer."	2 3 4 5 6 7 8 9	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is
3 4 5 6 7 8 9 10	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer."  Do you see that?	2 3 4 5 6 7 8 9 10	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?
3 4 5 6 7 8 9 10 11	Do you see that diagram in Figure C? A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer." Do you see that? A. I do. And it also states	2 3 4 5 6 7 8 9 10 11 12	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another
3 4 5 6 7 8 9 10 11 12 13	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer."  Do you see that?  A. I do. And it also states that these functions may be	2 3 4 5 6 7 8 9 10 11 12 13	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So
3 4 5 6 7 8 9 10 11 12 13 14	Do you see that diagram in Figure C? A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer." Do you see that? A. I do. And it also states that these functions may be pro-inflammatory in nature.	2 3 4 5 6 7 8 9 10 11 12 13 14	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would
3 4 5 6 7 8 9 10 11 12 13 14 15	Do you see that diagram in Figure C? A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer." Do you see that? A. I do. And it also states that these functions may be pro-inflammatory in nature. So, again, this is an	2 3 4 5 6 7 8 9 10 11 12 13 14 15	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would have appeared on my PubMed searches.
3 4 5 6 7 8 9 10 11 12 13 14 15 16	Do you see that diagram in Figure C? A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer." Do you see that? A. I do. And it also states that these functions may be pro-inflammatory in nature. So, again, this is an intriguing hypothesis, but it was in	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would have appeared on my PubMed searches.  Q. Down at the bottom left, it
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer."  Do you see that?  A. I do. And it also states that these functions may be pro-inflammatory in nature.  So, again, this is an intriguing hypothesis, but it was in 2009. And in ten years there's no	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would have appeared on my PubMed searches.  Q. Down at the bottom left, it has NCBI, which is the public release of
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer."  Do you see that?  A. I do. And it also states that these functions may be pro-inflammatory in nature.  So, again, this is an intriguing hypothesis, but it was in 2009. And in ten years there's no evidence suggesting that this hypothesis is true.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would have appeared on my PubMed searches.  Q. Down at the bottom left, it has NCBI, which is the public release of government and it has NIH.gov. What
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer."  Do you see that?  A. I do. And it also states that these functions may be pro-inflammatory in nature.  So, again, this is an intriguing hypothesis, but it was in 2009. And in ten years there's no evidence suggesting that this hypothesis is true.  Q. We'll get to that. Let's go	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would have appeared on my PubMed searches.  Q. Down at the bottom left, it has NCBI, which is the public release of government and it has NIH.gov. What is NIH?
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer."  Do you see that?  A. I do. And it also states that these functions may be pro-inflammatory in nature.  So, again, this is an intriguing hypothesis, but it was in 2009. And in ten years there's no evidence suggesting that this hypothesis is true.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would have appeared on my PubMed searches.  Q. Down at the bottom left, it has NCBI, which is the public release of government and it has NIH.gov. What is NIH?  A. That means it's referenced
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer." Do you see that? A. I do. And it also states that these functions may be pro-inflammatory in nature. So, again, this is an intriguing hypothesis, but it was in 2009. And in ten years there's no evidence suggesting that this hypothesis is true. Q. We'll get to that. Let's go to the page, the last page conclusions. A. Okay.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would have appeared on my PubMed searches.  Q. Down at the bottom left, it has NCBI, which is the public release of government and it has NIH.gov. What is NIH?  A. That means it's referenced in the National Institutes or National
3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Do you see that diagram in Figure C?  A. Yes. Q. And it says under Figure 1, "Potential sources of inflammatory stimuli that may contribute to the initiation and/or progression of epithelial ovarian cancer." Do you see that? A. I do. And it also states that these functions may be pro-inflammatory in nature. So, again, this is an intriguing hypothesis, but it was in 2009. And in ten years there's no evidence suggesting that this hypothesis is true. Q. We'll get to that. Let's go to the page, the last page conclusions. A. Okay.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	now.  (Document marked for identification as Exhibit Mossman-26.)  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Doctor, this is a study not from back in time. This is August 2018, a year ago, correct?  A. Yes. It's in another journal that I have never heard of. So I'm just trying to see whether it would have appeared on my PubMed searches.  Q. Down at the bottom left, it has NCBI, which is the public release of government and it has NIH.gov. What is NIH?  A. That means it's referenced in the National Institutes or National Library of Medicine.

70 (Pages 274 to 277)

	Page 278		Page 280
_			
1	A. NIH is the National	1	A. Prostaglandins.
2	Institutes of Health. I don't think the	2	Q. Thank you.
3	study was done at the National Institutes	3	"prostaglandins, and
4	of Health.	4	growth factors that contribute to
5	Q. And this study is entitled	5	increase cell division and genetic and
6	The Role of Inflammation and Inflammatory	6	epigenetic changes."
7	Mediators in the Development,	7	Do you agree with those
8	Progression, Metastasis and	8	statements?
9	Chemoresistance of Epithelial Ovarian	9	MR. FROST: Objection to
10	Cancer, correct?	10	form.
11	A. Yes. This appears to be	11	THE WITNESS: I believe that
12	another review with no new data. Allow	12	this is a generalized statement in
13	me to just go through this.	13	terms of epithelial cells, but not
14	Q. I'm going to read some	14	with regard to ovarian epithelial
15	sections in the abstract. "Inflammation	15	cells.
16	plays a role in the initiation and	16	BY MR. SMITH:
17	development of many types of cancers,	17	Q. "These exposure-induced
18	including epithelial ovarian cancer (EOC)	18	changes promote" we just went through
19	and high-grade serous ovarian cancer	19	that. "Furthermore, the pro-inflammatory
20	(HGSC), a type of epithelial ovarian	20	tumor microenvironment (TME) contributes
21	cancer."	21	to epithelial ovarian cancer and
22	Do you agree or disagree	22	metastases"
23	with that statement in the abstract of	23	A. Metastases.
24	this paper?	24	
24	uns paper?	24	Q. I don't know why I'm
	Page 279		Page 281
1	A. I disagree. This is a	1	tripping over my words today.
2	A. I disagree. This is a review. And I don't believe that	1 2	
	A. I disagree. This is a		tripping over my words today.
2	A. I disagree. This is a review. And I don't believe that	2	tripping over my words today "and chemo resistance.
2	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the	2 3	tripping over my words today "and chemo resistance. In this review, we will discuss the roles
2 3 4	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers	2 3 4	tripping over my words today "and chemo resistance. In this review, we will discuss the roles inflammation and inflammatory mediators
2 3 4 5	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.	2 3 4 5	tripping over my words today "and chemo resistance. In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression,
2 3 4 5 6	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's	2 3 4 5 6	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of
2 3 4 5 6 7	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.	2 3 4 5 6 7	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?
2 3 4 5 6 7 8	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.	2 3 4 5 6 7 8	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."
2 3 4 5 6 7 8 9	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the	2 3 4 5 6 7 8	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.
2 3 4 5 6 7 8 9 10	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and	2 3 4 5 6 7 8 9 10	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a
2 3 4 5 6 7 8 9	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.	2 3 4 5 6 7 8 9 10 11 12	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.
2 3 4 5 6 7 8 9 10 11 12 13	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.	2 3 4 5 6 7 8 9 10 11 12 13	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections	2 3 4 5 6 7 8 9 10 11 12 13 14	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first
2 3 4 5 6 7 8 9 10 11 12 13 14	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both	2 3 4 5 6 7 8 9 10 11 12 13 14 15	tripping over my words today.  "and chemo resistance. In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both peritoneal and ovulation-induced	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and epithelial ovarian cancer."
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both peritoneal and ovulation-induced inflammation. Additionally, epithelial	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and epithelial ovarian cancer."  Do you see that?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both peritoneal and ovulation-induced inflammation. Additionally, epithelial ovarian cancers have an inflammatory	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and epithelial ovarian cancer."  Do you see that?  A. I do.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both peritoneal and ovulation-induced inflammation. Additionally, epithelial ovarian cancers have an inflammatory component that contributes to their	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and epithelial ovarian cancer."  Do you see that?  A. I do.  Q. And it states, "Inflammation
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both peritoneal and ovulation-induced inflammation. Additionally, epithelial ovarian cancers have an inflammatory component that contributes to their progression. At sites of inflammation,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and epithelial ovarian cancer."  Do you see that?  A. I do.  Q. And it states, "Inflammation is part of the immune response that
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both peritoneal and ovulation-induced inflammation. Additionally, epithelial ovarian cancers have an inflammatory component that contributes to their progression. At sites of inflammation, epithelial cells are exposed to increased	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and epithelial ovarian cancer."  Do you see that?  A. I do.  Q. And it states, "Inflammation is part of the immune response that protects against foreign pathogens and
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both peritoneal and ovulation-induced inflammation. Additionally, epithelial ovarian cancers have an inflammatory component that contributes to their progression. At sites of inflammation, epithelial cells are exposed to increased levels of inflammatory mediators, such as	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and epithelial ovarian cancer."  Do you see that?  A. I do.  Q. And it states, "Inflammation is part of the immune response that protects against foreign pathogens and aids in healing. Inflammation is
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. I disagree. This is a review. And I don't believe that inflammation has been linked to the initiation of epithelial ovarian cancers or serous grades.  Q. Okay.  A. So I would I think it's an emphatic statement that needs to be referenced.  Q. There are this is the abstract. "There are connections" and we'll get to it.  A. Okay.  Q. "There are connections between epithelial ovarian cancer in both peritoneal and ovulation-induced inflammation. Additionally, epithelial ovarian cancers have an inflammatory component that contributes to their progression. At sites of inflammation, epithelial cells are exposed to increased	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	tripping over my words today.  "and chemo resistance.  In this review, we will discuss the roles inflammation and inflammatory mediators play in the development, progression, metastases and chemoresistance of epithelial ovarian cancer."  Correct?  MR. FROST: Objection to form.  THE WITNESS: Yes, this is a review that discusses that.  BY MR. SMITH:  Q. Okay. And the first paragraph is, "Inflammation and epithelial ovarian cancer."  Do you see that?  A. I do.  Q. And it states, "Inflammation is part of the immune response that protects against foreign pathogens and

71 (Pages 278 to 281)

	Page 282		Page 284
1	particles or pollutants or irritants, or	1	A. I do.
2	an increase in cellular stress. The	2	Q. The next paragraph talks
3	ultimate goal of the inflammatory	3	about ovarian cancer. And it states
4	response is to restore tissue	4	one, two, three four lines down,
5	homeostasis, either by destruction or	5	"Chronic inflammation is an important
6	healing of the damaged tissue.	6	risk factor associated with epithelial
7	"The acute or immediate	7	ovarian cancer and high-grade serous
8	inflammatory response involves	8	ovarian cancer (HGSC), the most malignant
9	modification of the vasculature	9	subtype of epithelial ovarian cancer."
10	surrounding the site of stress or damage	10	Do you agree with that?
11	to increase blood flow. This alteration	11	A. I don't see a statement for
12	is then followed by activation of innate	12	that. I know inflammation has been
13	immune cells already present in the	13	associated with late stage tumors, but we
14	tissue including macrophages, dendritic	14	don't know what the role is in terms of
15	cells (DC) and mast cells and an increase	15	disease or protection from disease and
16	in infiltration of additional innate	16	what is the function of this.
17	immune cells into the affected tissue."	17	Q. "In this review, we will be
18		18	primarily focus on inflammation as a risk
19	Do you agree with that? MR. FROST: Objection.	19	factor for invasive epithelial ovarian
20	THE WITNESS: It's a	20	cancer, but have also included supportive
21		21	evidence from other ovarian cancer
22	generalized statement for	22	
23	inflammation, yes. BY MR. SMITH:	23	subtypes studied that do not describe the
24		24	subtype of ovarian cancer and other tumor
24	Q. It says, "At sites of	2 <del>4</del>	types as indicated."
	Page 283		- 005
	1 dgc 203		Page 285
1		1	
1 2	inflammation, there are high levels of	1 2	And then they go through and
	inflammation, there are high levels of reactive oxygen species, cytokines,	1	And then they go through and they talk about, on the next page
2	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are	2	And then they go through and
2 3	inflammation, there are high levels of reactive oxygen species, cytokines,	2 3	And then they go through and they talk about, on the next page well, they talk about signaling pathways
2 3 4	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."	2 3 4	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the
2 3 4 5	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other	2 3 4 5	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.
2 3 4 5 6	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?	2 3 4 5 6	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the
2 3 4 5 6 7	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.	2 3 4 5 6 7	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor
2 3 4 5 6 7 8	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to	2 3 4 5 6 7 8	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page
2 3 4 5 6 7 8	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that	2 3 4 5 6 7 8	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has
2 3 4 5 6 7 8 9	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high	2 3 4 5 6 7 8 9	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.
2 3 4 5 6 7 8 9 10	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents.	2 3 4 5 6 7 8 9 10	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation.
2 3 4 5 6 7 8 9 10 11 12	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high	2 3 4 5 6 7 8 9 10 11 12	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other
2 3 4 5 6 7 8 9 10 11 12 13	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents.  So in that vein, I would agree	2 3 4 5 6 7 8 9 10 11 12 13	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."
2 3 4 5 6 7 8 9 10 11 12 13 14	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents. So in that vein, I would agree with it.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of
2 3 4 5 6 7 8 9 10 11 12 13 14 15	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents.  So in that vein, I would agree with it.	2 3 4 5 6 7 8 9 10 11 12 13 14 15	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of 39?  A. I do.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents. So in that vein, I would agree with it.  BY MR. SMITH:  Q. "Acute inflammation is essential for the tissue homeostasis and	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of 39?  A. I do.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents. So in that vein, I would agree with it.  BY MR. SMITH:  Q. "Acute inflammation is essential for the tissue homeostasis and to protect against normal exposure to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of 39?  A. I do. Q. And it says, "The other causes of inflammation in the ovaries
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents. So in that vein, I would agree with it.  BY MR. SMITH:  Q. "Acute inflammation is essential for the tissue homeostasis and to protect against normal exposure to pathogens. However, in certain cases,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of 39?  A. I do. Q. And it says, "The other causes of inflammation in the ovaries and/or fallopian tubes are endometriosis,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents. So in that vein, I would agree with it.  BY MR. SMITH:  Q. "Acute inflammation is essential for the tissue homeostasis and to protect against normal exposure to pathogens. However, in certain cases, the body is unable to resolve this	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of 39?  A. I do. Q. And it says, "The other causes of inflammation in the ovaries and/or fallopian tubes are endometriosis, obesity, polycystic ovarian syndrome or
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents. So in that vein, I would agree with it.  BY MR. SMITH:  Q. "Acute inflammation is essential for the tissue homeostasis and to protect against normal exposure to pathogens. However, in certain cases, the body is unable to resolve this response or is subjected to repeated	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of 39?  A. I do. Q. And it says, "The other causes of inflammation in the ovaries and/or fallopian tubes are endometriosis, obesity, polycystic ovarian syndrome or PCOS, and talc exposure."
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents. So in that vein, I would agree with it.  BY MR. SMITH:  Q. "Acute inflammation is essential for the tissue homeostasis and to protect against normal exposure to pathogens. However, in certain cases, the body is unable to resolve this response or is subjected to repeated stimulation, resulting in chronic	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of 39?  A. I do. Q. And it says, "The other causes of inflammation in the ovaries and/or fallopian tubes are endometriosis, obesity, polycystic ovarian syndrome or PCOS, and talc exposure."  Do you agree with that?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	inflammation, there are high levels of reactive oxygen species, cytokines, chemokines, and growth factors that are produced by the immune cells and other cells in tissue."  Do you agree with that?  MR. FROST: Objection to form.  THE WITNESS: I agree that this may be true in chronic inflammation or extremely high exposures to very toxic agents. So in that vein, I would agree with it.  BY MR. SMITH:  Q. "Acute inflammation is essential for the tissue homeostasis and to protect against normal exposure to pathogens. However, in certain cases, the body is unable to resolve this response or is subjected to repeated	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	And then they go through and they talk about, on the next page well, they talk about signaling pathways and transcription factors and innate immune response. It talks about the immune responses.  Number 2 on the next page talks about inflammation as a risk factor for epithelial ovarian cancer. It has cites there. It talks about ovulation. It talks about infection.  And then it says, "Other sources of inflammation."  Do you see that on Page 4 of 39?  A. I do. Q. And it says, "The other causes of inflammation in the ovaries and/or fallopian tubes are endometriosis, obesity, polycystic ovarian syndrome or PCOS, and talc exposure."

72 (Pages 282 to 285)

	- 005		
	Page 286		Page 288
1	sort of bleed together.	1	the next page, Page 5 of 39. And you go
2	THE WITNESS: Yeah, again	2	three paragraphs down. It says, "Talc is
3	there's no reference for for	3	a silicate mineral and exposure to it can
4	this statement. So I I	4	cause inflammation of the ovaries and
5	disagree with it. Because talc	5	poses a risk hazard for the development
6	exposures have not been linked to	6	of epithelial ovarian cancer."
7	inflammation in the ovaries. And	7	Do you agree with that
8	I think I've covered all the	8	statement or not?
9	information that I reviewed to	9	A. Let me look up Reference 45
10	reach that conclusion. So this is	10	and I'll tell you.
11	a review by cell biologists in a	11	No.
12	low-impact journal I've never	12	Q. "It has been proposed that
13	heard from or seen before.	13	talc from talcum powder used for dusting
14	But in looking at the	14	and from condoms in the vaginal
15	original data which is not	15	diaphragms can migrate up the fallopian
16	relevant	16	tubes in retrograde flow of fluids and
17	BY MR. SMITH:	17	mucus and get lodged in the ovaries.
18	Q. Whoa, whoa. Hold on a	18	Tubal ligation, which is protective for
19	second. Low-impact journal. What do you	19	epithelial ovarian cancer is thought to
20	base that on?	20	block the transport of talc from lower
21	A. I've never heard of Cancers.	21	genital from the lower genital tract.
22	I've heard	22	Talc behaves as a foreign particle,
23	Q. Listen how do you know	23	triggering an inflammatory response and
24	what the tell me what the impact	24	has two sites. The talc attracts
	Page 287		Page 289
1	factor is then, for this journal.	1	macrophages, which then try to
2	A. If I haven't seen it, let me	2	phagocytose it. The macrophages then
3	guess	3	send chemotactic signals to other immune
4	Q. No, ma'am, I don't want a	4	response mediators and initiate a wound
5	guess	5	
6		ا ع	healing. Since talc is not degraded by
٥	A it's going to be lower	6	healing. Since talc is not degraded by the body, it inhibits the wound healing
7	A it's going to be lower Q I want you to tell me		
		6	the body, it inhibits the wound healing
7 8 9	Q I want you to tell me what the impact factor for this journal is.	6 7 8 9	the body, it inhibits the wound healing process, resulting in chronic
7 8 9 10	Q I want you to tell me what the impact factor for this journal	6 7 8 9 10	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?
7 8 9 10 11	Q I want you to tell me what the impact factor for this journal is.	6 7 8 9 10 11	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.
7 8 9 10 11 12	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why	6 7 8 9 10 11 12	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?
7 8 9 10 11	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?	6 7 8 9 10 11	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the
7 8 9 10 11 12 13 14	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was	6 7 8 9 10 11 12 13 14	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through
7 8 9 10 11 12 13	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said	6 7 8 9 10 11 12 13 14 15	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the
7 8 9 10 11 12 13 14	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it	6 7 8 9 10 11 12 13 14	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through
7 8 9 10 11 12 13 14 15	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it  Q. I understand.	6 7 8 9 10 11 12 13 14 15	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through these. But these statements
7 8 9 10 11 12 13 14 15	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it  Q. I understand.  A so, yes.	6 7 8 9 10 11 12 13 14 15 16	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through these. But these statements aren't supported by the
7 8 9 10 11 12 13 14 15 16	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it Q. I understand. A so, yes. Q. I understand. I want you to	6 7 8 9 10 11 12 13 14 15 16 17	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through these. But these statements aren't supported by the references.
7 8 9 10 11 12 13 14 15 16 17 18	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it Q. I understand. A so, yes. Q. I understand. I want you to tell me what your basis your basis for	6 7 8 9 10 11 12 13 14 15 16 17	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through these. But these statements aren't supported by the references.  In fact, 47 is a paper by
7 8 9 10 11 12 13 14 15 16 17 18	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it  Q. I understand.  A so, yes.  Q. I understand. I want you to tell me what your basis your basis for that is because you've never heard of it.	6 7 8 9 10 11 12 13 14 15 16 17 18	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through these. But these statements aren't supported by the references.  In fact, 47 is a paper by Muscat and Huncharek on perineal
7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it  Q. I understand.  A so, yes.  Q. I understand. I want you to tell me what your basis your basis for that is because you've never heard of it.  A. I have I am aware of all	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through these. But these statements aren't supported by the references.  In fact, 47 is a paper by Muscat and Huncharek on perineal talc use and ovarian cancer, a
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it  Q. I understand.  A so, yes.  Q. I understand. I want you to tell me what your basis your basis for that is because you've never heard of it.  A. I have I am aware of all the cancer journals that are high profile	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through these. But these statements aren't supported by the references.  In fact, 47 is a paper by Muscat and Huncharek on perineal talc use and ovarian cancer, a critical review. It concludes
7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q I want you to tell me what the impact factor for this journal is.  A. We can look it up. Why don't we look it up?  Q. No, ma'am. You said it was a low-impact journal and you said  A. I have never heard of it Q. I understand. A so, yes. Q. I understand. I want you to tell me what your basis your basis for that is because you've never heard of it.  A. I have I am aware of all the cancer journals that are high profile and high impact. This is not one of	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	the body, it inhibits the wound healing process, resulting in chronic inflammation."  Would you agree with those statements?  MR. FROST: Objection.  THE WITNESS: No, and they are not supported by the references. We can go through these. But these statements aren't supported by the references.  In fact, 47 is a paper by Muscat and Huncharek on perineal talc use and ovarian cancer, a critical review. It concludes that talc is not associated with

73 (Pages 286 to 289)

	Page 290		Page 292
1	Q. No, no, no.	1	inconsistent statements that are not
2	A. So	2	supported by the references they cite.
3	Q. Doctor, it says, "Talc,	3	Q. Doctor, did you use
4	there is not a case for causality."	4	Huncharek and Muscat as a basis for your
5	A. Right.	5	opinions in this case, this reference
6	Q. The the study published a	6	here?
7	statistically significant increased risk	7	A. It was one of several
8	of ovarian cancer from genital talc use.	8	reviews, yes.
9	MR. FROST: Objection.	9	Q. And you are stating that
10	THE WITNESS: No.	10	that paper did not reveal a statistically
11	BY MR. SMITH:	11	significant increased risk of ovarian
12	Q. It does not?	12	cancer from genital talc use?
13	A. Muscat and Huncharek do not	13	MR. FROST: Objection to
14	make	14	form.
15	Q. Paid experts from the	15	THE WITNESS: I would go
16	defendants.	16	back to that paper and see how it
17	A. Pardon me?	17	was worded, but the conclusions of
18	MR. FROST: Objection.	18	the authors were that talc did not
19	BY MR. SMITH:	19	play a role in the causation of
20	Q. Did you know that they were	20	ovarian cancers.
21	paid experts from the defendants when	21	BY MR. SMITH:
22	they wrote this paper?	22	Q. Did the epidemiological
23	A. No	23	study that is referenced here of Muscat
24	Q. Okay.	24	and Huncharek conclude that there was a
	Page 291		Page 293
1	A this was in 2008. And	1	statistically significant increased risk
2	A this was in 2008. And they concluded that there was not an	2	statistically significant increased risk of ovarian cancer from genital talc use?
2	A this was in 2008. And they concluded that there was not an association. Yet this individual is		statistically significant increased risk of ovarian cancer from genital talc use?  A. I
2 3 4	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the	2 3 4	statistically significant increased risk of ovarian cancer from genital talc use?
2 3 4 5	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign	2 3 4 5	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.
2 3 4 5 6	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory	2 3 4 5 6	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd
2 3 4 5	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign	2 3 4 5	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.
2 3 4 5 6 7 8	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory	2 3 4 5 6	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper
2 3 4 5 6 7 8	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.	2 3 4 5 6 7 8 9	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:
2 3 4 5 6 7 8 9	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that.	2 3 4 5 6 7 8 9	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.
2 3 4 5 6 7 8 9 10	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that.  Henderson didn't show that. Henderson is	2 3 4 5 6 7 8 9 10	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was
2 3 4 5 6 7 8 9 10 11 12	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that.  Henderson didn't show that. Henderson is an editorial.	2 3 4 5 6 7 8 9 10 11 12	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.
2 3 4 5 6 7 8 9 10 11 12 13	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question	2 3 4 5 6 7 8 9 10 11 12 13	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and
2 3 4 5 6 7 8 9 10 11 12 13 14	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal	2 3 4 5 6 7 8 9 10 11 12 13 14	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.
2 3 4 5 6 7 8 9 10 11 12 13 14	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of,	2 3 4 5 6 7 8 9 10 11 12 13 14 15	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have  Q. Let me ask I'm sorry, I	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting inflammation to the epithelial ovarian
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have  Q. Let me ask I'm sorry, I didn't mean to cut you off.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting inflammation to the epithelial ovarian cancer are several studies that
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have  Q. Let me ask I'm sorry, I didn't mean to cut you off.  A. Yeah.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting inflammation to the epithelial ovarian
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have  Q. Let me ask I'm sorry, I didn't mean to cut you off.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting inflammation to the epithelial ovarian cancer are several studies that
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have  Q. Let me ask I'm sorry, I didn't mean to cut you off.  A. Yeah. Q. Go ahead. A. But we can still spend	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting inflammation to the epithelial ovarian cancer are several studies that demonstrate the intake of nonsteroidal antiinflammatory drugs, or NSAIDs, specifically of aspirin, correlates
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have  Q. Let me ask I'm sorry, I didn't mean to cut you off.  A. Yeah. Q. Go ahead. A. But we can still spend time going through it, but it's not going	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting inflammation to the epithelial ovarian cancer are several studies that demonstrate the intake of nonsteroidal antiinflammatory drugs, or NSAIDs,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have  Q. Let me ask I'm sorry, I didn't mean to cut you off.  A. Yeah. Q. Go ahead. A. But we can still spend time going through it, but it's not going to alter my opinion that these authors	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting inflammation to the epithelial ovarian cancer are several studies that demonstrate the intake of nonsteroidal antiinflammatory drugs, or NSAIDs, specifically of aspirin, correlates adversely with the risk of epithelial"  A. Are we going back to this
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A this was in 2008. And they concluded that there was not an association. Yet this individual is citing this reference to support the statement "talc behaves as a foreign particle triggering an inflammatory response." And it's wrong. The paper is wrong, and the references that it uses are wrong.  Heller didn't show that. Henderson didn't show that. Henderson is an editorial.  So I would really question the source of this supposed journal called Cancers that I've never heard of, while and we have  Q. Let me ask I'm sorry, I didn't mean to cut you off.  A. Yeah. Q. Go ahead. A. But we can still spend time going through it, but it's not going	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	statistically significant increased risk of ovarian cancer from genital talc use?  A. I  MR. FROST: Objection to form.  THE WITNESS: Yeah. I'd have to go back and look at the paper  BY MR. SMITH:  Q. Okay.  A to see whether that was stated as such.  Q. Now, under NSAIDS and reduced risk of epithelial ovarian cancer.  "Further connecting inflammation to the epithelial ovarian cancer are several studies that demonstrate the intake of nonsteroidal antiinflammatory drugs, or NSAIDs, specifically of aspirin, correlates adversely with the risk of epithelial"

1 Q. Yes. 2 A. Or for 3 MR. FROST: Yeah, I was 4 going to say, what page are you 5 on? 5 THE WITNESS: Yeah. 6 THE WITNESS: Yeah. 7 MR. SMITH: I'm on Page 5. 8 Excuse me. I'm right below where 9 I was reading. 10 MR. FROST: Oh, I see. 11 Section 2.4? 12 MR. SMITH: 13 BY MR. SMITH: Yep. 14 Q. "Further connecting 15 inflammation to epithelial ovarian cancer 16 are several studies that demonstrate that 17 intake of nonsteroidal antiinflammatory 18 drugs, NSAIDs, specifically of aspirin, 19 correlates inversely with risk of ovarian 20 cancer and endometrial cancer," and it 21 has cites there. 22 Do you see that, Doctor?  1 point it to her? 2 MR. SMITH: That's fine. 2 MR. SMITH: That's fine. 3 THE WITNESS: Yeah. 6 4 BY MR. SMITH: 4 BY MR. SMITH: 4 DO, "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers inclue epithelial ovarian cancer." 4 Would you agree or disag with that statement? 4 A. Let me look at Reference and see whether it makes sense. 4 No that's not supported by that. 5 Q. Okay. 6 A. It's another misquote. It' talking about tumor suppressor get ovarian cancer. 6	Okay. Okay. Okay. Iding Okay. Iding Okay.
A. Or for  MR. FROST: Yeah, I was  going to say, what page are you  on?  THE WITNESS: Yeah.  MR. SMITH:  Do no?  THE WITNESS: Yeah.  MR. SMITH: I'm on Page 5.  Excuse me. I'm right below where  I was reading.  MR. FROST: Oh, I see.  MR. SMITH:  Section 2.4?  MR. SMITH:  MR. SMITH:  A. Let me look at Reference and see whether it makes sense.  MR. SMITH:  MR. SMITH:  A. Let me look at Reference and see whether it makes sense.  No that's not supported by that.  Correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there.  Do you see that, Doctor?  MR. SMITH: That's fine.  THE WITNESS: Yeah.  BY MR. SMITH:  The WITNESS: Yeah.  MR. SMITH:  The WITNESS: Yeah.  BY MR. SMITH:  The WITNESS: Yeah.  BY MR. SMITH:  The WITNESS: Yeah.  BY MR. SMITH:  The Witness: Yeah.  We with that statement?  The Witness: Yeah.  The WITNESS: Yeah.  BY MR. SMITH:  That's fine.  THE WITNESS: Yeah.  BY MR. SMITH:  The winness: Yeah.  The WiTness: Yeah.  BY MR. SMITH:  That's fine.  THE WITNESS: Yeah.  The winness: Yeah.  The witness has also been shown to facilitate epigenetic mechanisms in many cancers inclu epithelial ovarian cancer.  The winness and see whether it makes sense.  The world and see whether it makes sense.  The winness and see whether it makes sense.  The w	Okay. Okay. Okay. Iding Okay. Iding Okay.
3 MR. FROST: Yeah, I was 4 going to say, what page are you 5 on? 6 THE WITNESS: Yeah. 7 MR. SMITH: I'm on Page 5. 8 Excuse me. I'm right below where 9 I was reading. 10 MR. FROST: Oh, I see. 11 Section 2.4? 12 MR. SMITH: Yep. 13 BY MR. SMITH: 14 Q. "Further connecting 15 inflammation to epithelial ovarian cancer 16 are several studies that demonstrate that 17 intake of nonsteroidal antiinflammatory 18 drugs, NSAIDs, specifically of aspirin, 19 correlates inversely with risk of ovarian 20 cancer and endometrial cancer," and it 21 has cites there. 22 Do you see that, Doctor?  3 BY MR. SMITH: 4 BY MR. SMITH: 5 Q. "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers inclu epithelial ovarian cancer." 10 weith that statement? 11 A. Let me look at Reference and see whether it makes sense. 12 No that's not supported by that. 13 No that's not supported by that. 14 that. 15 Q. Okay. 16 A. It's another misquote. It's talking about tumor suppressor get ovarian cancer. 19 Q. You've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	Okay. Okay. Okay. Iding Okay. Iding Okay.
4 going to say, what page are you 5 on? 6 THE WITNESS: Yeah. 7 MR. SMITH: I'm on Page 5. 8 Excuse me. I'm right below where 9 I was reading. 10 MR. FROST: Oh, I see. 11 Section 2.4? 12 MR. SMITH: Yep. 13 BY MR. SMITH: 14 Q. "Further connecting 15 inflammation to epithelial ovarian cancer 16 are several studies that demonstrate that 17 intake of nonsteroidal antiinflammatory 18 drugs, NSAIDs, specifically of aspirin, 19 correlates inversely with risk of ovarian 20 cancer and endometrial cancer," and it 21 Do you see that, Doctor?  4 BY MR. SMITH: 5 Q. "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers include epithelial ovarian cancer." 10 with that statement? 11 A. Let me look at Reference and see whether it makes sense. 12 and see whether it makes sense. 13 No that's not supported by that. 14 that. 15 inflammation to epithelial ovarian cancer 16 A. It's another misquote. It' talking about tumor suppressor genovarian cancer. 19 Q. You've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	oding ree
5 on? 6 THE WITNESS: Yeah. 7 MR. SMITH: I'm on Page 5. 8 Excuse me. I'm right below where 9 I was reading. 10 MR. FROST: Oh, I see. 11 Section 2.4? 12 MR. SMITH: Yep. 13 BY MR. SMITH: 14 Q. "Further connecting 15 inflammation to epithelial ovarian cancer 16 are several studies that demonstrate that 17 intake of nonsteroidal antiinflammatory 18 drugs, NSAIDs, specifically of aspirin, 19 correlates inversely with risk of ovarian 20 cancer and endometrial cancer," and it 21 Do you see that, Doctor? 2 Would you agree or disag with that statement? 4 A. Let me look at Reference and see whether it makes sense. 10 No that's not supported by that. 11 Q. Okay. 12 A. It's another misquote. It's another misquote. It's another misquote. It's another misquote. It's ovarian cancer. 15 Q. You've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	ading ree
THE WITNESS: Yeah.  MR. SMITH: I'm on Page 5.  Excuse me. I'm right below where  I was reading.  MR. FROST: Oh, I see.  MR. SMITH: Yep.  Section 2.4?  MR. SMITH: Yep.  BY MR. SMITH:  Q. "Further connecting inflammation to epithelial ovarian cancer inflammation to epithelial ovarian cancer intlake of nonsteroidal antiinflammatory are several studies that demonstrate that intake of nonsteroidal antiinflammatory are correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there.  Do you see that, Doctor?  Been shown to facilitate epigenetic mechanisms in many cancers mechanisms in many cancers incluse mechanisms in many cancers incluse mechanisms in many cancers.  Would you agree or disage with that statement?  A. Let me look at Reference and see whether it makes sense.  No that's not supported by that.  Q. Okay.  A. It's another misquote. It' talking about tumor suppressor get ovarian cancer.  Q. You've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	ading ree
MR. SMITH: I'm on Page 5.  Excuse me. I'm right below where  I was reading.  MR. FROST: Oh, I see.  Section 2.4?  MR. SMITH: Yep.  BY MR. SMITH:  Q. "Further connecting inflammation to epithelial ovarian cancer are several studies that demonstrate that intake of nonsteroidal antiinflammatory are correlates inversely with risk of ovarian cancer.  MR. SAIDs, specifically of aspirin, cancer and endometrial cancer," and it  Do you see that, Doctor?  MR. SMITH:  BY MR. SMITH:  Correlates inversely with risk of ovarian cancer.  MR. SMITH:  BY MR. SMITH:  Correlates inversely with risk of ovarian cancer.  Correlates inversely with risk of ovarian cancer.  Do you see that, Doctor?	ree 86
8 Excuse me. I'm right below where 9 I was reading. 10 MR. FROST: Oh, I see. 11 Section 2.4? 12 MR. SMITH: Yep. 13 BY MR. SMITH: 14 Q. "Further connecting 15 inflammation to epithelial ovarian cancer 16 are several studies that demonstrate that 17 intake of nonsteroidal antiinflammatory 18 drugs, NSAIDs, specifically of aspirin, 19 correlates inversely with risk of ovarian 20 cancer and endometrial cancer," and it 21 Do you see that, Doctor?  8 epithelial ovarian cancer.  9 Would you agree or disag with that statement?  10 with that statement?  11 A. Let me look at Reference and see whether it makes sense.  12 No that's not supported by that.  13 Q. Okay. 14 talking about tumor suppressor get ovarian cancer. 15 Q. You've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	ree 86
9 I was reading. 10 MR. FROST: Oh, I see. 11 Section 2.4? 12 MR. SMITH: Yep. 13 BY MR. SMITH: 14 Q. "Further connecting 15 inflammation to epithelial ovarian cancer 16 are several studies that demonstrate that 17 intake of nonsteroidal antiinflammatory 18 drugs, NSAIDs, specifically of aspirin, 19 correlates inversely with risk of ovarian 20 cancer and endometrial cancer," and it 21 has cites there. 22 Do you see that, Doctor?  9 Would you agree or disag with that statement?  10 with that statement?  A. Let me look at Reference and see whether it makes sense.  11 No that's not supported by that.  12 Q. Okay. 13 A. Let me look at Reference and see whether it makes sense.  14 A. It's another misquote. It's alking about tumor suppressor get ovarian cancer.  17 Vou've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	: 86
MR. FROST: Oh, I see.  10 with that statement?  A. Let me look at Reference and see whether it makes sense.  No that's not supported by that.  11	: 86
Section 2.4?  MR. SMITH: Yep.  BY MR. SMITH:  Q. "Further connecting inflammation to epithelial ovarian cancer are several studies that demonstrate that intake of nonsteroidal antiinflammatory drugs, NSAIDs, specifically of aspirin, correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there.  Do you see that, Doctor?  12	
MR. SMITH: Yep.  BY MR. SMITH:  Q. "Further connecting inflammation to epithelial ovarian cancer are several studies that demonstrate that intake of nonsteroidal antiinflammatory drugs, NSAIDs, specifically of aspirin, correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there.  Do you see that, Doctor?  12 and see whether it makes sense.  No that's not supported by that.  14	
BY MR. SMITH:  Q. "Further connecting inflammation to epithelial ovarian cancer are several studies that demonstrate that intake of nonsteroidal antiinflammatory drugs, NSAIDs, specifically of aspirin, correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there.  Do you see that, Doctor?  13 No that's not supported by that.  14 A. It's another misquote. It' 17 talking about tumor suppressor get ovarian cancer. 18 O. Okay. 19 Vo. Okay. 19 Vo. Okay. 10 A. It's another misquote. It' 11 talking about tumor suppressor get ovarian cancer. 12 O. You've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	
Q. "Further connecting 14 that.  15 inflammation to epithelial ovarian cancer 15 Q. Okay.  16 are several studies that demonstrate that 17 intake of nonsteroidal antiinflammatory 18 drugs, NSAIDs, specifically of aspirin, 19 correlates inversely with risk of ovarian 20 cancer and endometrial cancer," and it 21 has cites there. 21 document, and you haven't seen the 22 Do you see that, Doctor? 24 that.  15 Q. Okay.  16 A. It's another misquote. It's alking about tumor suppressor generates ovarian cancer.  19 Q. You've never seen this document, and you haven't seen the 21 document reference. So you don't what it says, do you, Doctor?	
inflammation to epithelial ovarian cancer are several studies that demonstrate that intake of nonsteroidal antiinflammatory arrows, NSAIDs, specifically of aspirin, correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there.  Do you see that, Doctor?  Do you see that, Doctor?  Do you see that, Doctor?  Do you see that demonstrate that 16 A. It's another misquote. It' talking about tumor suppressor get ovarian cancer.  Q. You've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	
are several studies that demonstrate that intake of nonsteroidal antiinflammatory drugs, NSAIDs, specifically of aspirin, correlates inversely with risk of ovarian cancer.  19 correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there.  20 Do you see that, Doctor?  16 A. It's another misquote. It' talking about tumor suppressor get ovarian cancer.  19 Q. You've never seen this document, and you haven't seen the document reference. So you don't what it says, do you, Doctor?	
intake of nonsteroidal antiinflammatory drugs, NSAIDs, specifically of aspirin, correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there. Do you see that, Doctor?  17 talking about tumor suppressor ger ovarian cancer.  19 Q. You've never seen this document, and you haven't seen th 21 document reference. So you don't 22 what it says, do you, Doctor?	
drugs, NSAIDs, specifically of aspirin, correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there. Do you see that, Doctor?  18 ovarian cancer.  19 Q. You've never seen this document, and you haven't seen th 21 document reference. So you don't 22 what it says, do you, Doctor?	3
correlates inversely with risk of ovarian cancer and endometrial cancer," and it has cites there. Do you see that, Doctor?  19 Q. You've never seen this document, and you haven't seen th document reference. So you don't what it says, do you, Doctor?	nes in
cancer and endometrial cancer," and it cancer and endometrial cancer," and it has cites there. Do you see that, Doctor?  Q. You've never seen this document, and you haven't seen th document reference. So you don't what it says, do you, Doctor?	
20 cancer and endometrial cancer," and it 21 has cites there. 22 Do you see that, Doctor? 20 document, and you haven't seen th 21 document reference. So you don't 22 what it says, do you, Doctor?	
has cites there. 21 document reference. So you don't Do you see that, Doctor? 22 what it says, do you, Doctor?	e
Do you see that, Doctor? 22 what it says, do you, Doctor?	know
A. I do, and again these 23 MR. FROST: Objection.	
24 studies are controversial and the 24 THE WITNESS: I can re-	ad the
= 1 Stadies are controversial and the	
Page 295 Page	e 297
1 statement that he puts forth does not 1 title.	
2 agree with a lot of the studies. 2 BY MR. SMITH:	
3 And let me check which ones 3 Q. Well, that's not the whole	
4 he's referencing, but I wouldn't agree 4 paper though, is it, Doctor?	
5 with this statement. 5 A. Epigenetic mechanisms.	
6 Q. Okay. Go to Page 11 of 39, 6 Okay. We're talking about tumor	
7 if you look at the bottom. It's 3.1. 7 suppressor genes and methylation.	It's
8 It's ROS and oxidative stress. 8 an epigenetic mechanism. OS, I ha	ve no
9 Do you see it? 9 idea what that means.	
10 A. I do. 10 Q. Do you agree or disagree	
Q. And if you go to the one, 11 with the statement, "Oxidative stre	ss has
two, three fourth paragraph. The laso been shown to facilitate epiger	
paragraph at the bottom says, "Oxidative 13 mechanisms in many cancers inclu	
stress has also been shown to facilitate 14 epithelial ovarian cancer"?	9
15 epigenetic mechanisms in many cancers, 15 A. It looks like, to me, that	
16 including epithelial ovarian cancer." 16 this Reference 86 is talking about	
17 Would you agree or disagree 17 methylation of tumor suppression g	renes
with that? 18 and is not exploring the oxidative s	
19 MR. FROST: Objection. 19 by any agents on these genes.	
20 THE WITNESS: Let's go so 20 Q. Do you agree or disagree	
21 we're on the third paragraph and 21 with the statement?	
what sentence are you talking 22 MR. FROST: Objection.	
	zith
MR. FROST: Do you mind if I 24 oxidative stress has been show	

75 (Pages 294 to 297)

1 facilitate epigenetic mechanisms. 2 Again, I question whether 3 Reference 86 used oxidative stress in sults to look at methylation of tumor suppressor genes. And I doubt that they did from the title. 3 BY MR. SMITH: 4 BY MR. SMITH: 5 Q. You doubt they did. You doubt know, correct? 6 MR. FROST: Objection. 7 THE WITNESS: No. Unless 12 A. I didn't review this publication, right? 8 BY MR. SMITH: 9 Q. You doubt they did. You 9 publication, right? 11 MR. FROST: Objection. 12 THE WITNESS: No. Unless 12 A. I didn't review this publication, right? 13 you have the paper. I'd be delighted to look at it. 15 BY MR. SMITH: 15 BY MR. SMITH: 15 BY MR. SMITH: 15 BY MR. SMITH: 16 Q. And the statement talks 16 Q. Okay. And it states, 17 about, "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers, including epithelial ovarian cancer." 19 Would you agree with that? 20 ovarian cancer." 21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just 23 relevant in the development of these worldwide. Environmental, hormonal, and viral-related factors are strongly relevant in the development of these generation of reactive oxygen species."  Page 299 1 because I don't believe that that 1 statement is reflected in the 2 statement is reflected in the 4 to see the paper.  But based upon the references that you've pointed me to already, I am suspicious 7 whether it does or not.  MR. SMITH: Okay. Let's 9 MR. SMITH: Okay. Let's 9 MR. SMITH: Okay. Let's 9 MR. SMITH: I did something 14 with my exhibit stickers. 15 That's 26. (Document marked for 16 Concerns and is literally defined as 'an imbalance between ROS 15 defined as 'an imbalance between ROS 16 defined as 'an imbalance in the redocuted of them.  Q. Okay. Well, we'll read the whole abstract.				
2 Again, I question whether 3 Reference 86 used oxidative stress in sults to look at methylation of 4 tumor suppressor genes. And I doubt that they did from the title. 5 Land title. 6 Land they did from the title. 7 Litle. 8 BY MR. SMITH: 9 Q. You doubt they did. You don't know, correct? 10 Land they did. You don't know, correct? 11 MR. FROST: Objection. 12 THE WITNESS: No. Unless 12 you have the paper. I'd be delighted to look at it. 15 BY MR. SMITH: 16 Q. And the statement talks 16 Would you agree with that? 19 In many cancers, including epithelial 20 ovarian cancer." 20 Would you agree with that? 21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just 23 said that I don't agree with it, 24 said that I don't agree with it, 24 said that I don't agree with it, 24 said that I don't agree with it, 25 MR. SMITH: Osay. Let's 10 sec. I don't think I marked that 1 as an exhibit, did I? MR. FROST: No. 12 MR. F		Page 298		Page 300
Reference 86 used oxidative stress insults to look at methylation of tumor suppressor genes. And I doubt that they did from the title.  BY MR. SMITH: Q. You doubt they did. You don't know, correct?  THE WITNESS: No. Unless you have the paper. I'd be delighted to look at it. BY MR. SMITH: D. And the statement talks Shown to facilitate epigenetic mechanisms in many cancers, including epithelial ovarian cancer." Would you agree with that? Would you agree with that? Said that I don't agree with it,  Page 299  Decause I don't believe that that statement is reflected in the to already, I am suspicious whether it does or not. MR. SMITH: Okay. Let's MR. SMITH: I did something with Mr. PKOST: No. Log Colorument marked for  MR. FROST: No. Log Colorument marked for  MR. FROST: No. Log Colorument marked for  MR. SMITH: I did something with my exhibit stickers. A. Yes, I reviewed for them. A. Yes, I review of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, no. Q. You said that you were a reviewer of this publication, n	1	facilitate epigenetic mechanisms.	1	A. I do.
4 insults to look at methylation of 5 tumor suppressor genes. And I 6 doubt that they did from the 6 title. 7 title. 8 BY MR. SMITH: 8 9 Q. You doubt they did. You 9 10 don't know, correct? 10 MR. FROST: Objection. 11 MR. FROST: Objection. 11 MR. FROST: Objection. 11 MR. FROST: Objection. 11 MR. FROST: Objection. 12 THE WITNESS: No. Unless 12 A Oncotarget is a journal, and I review papers for Oncotarget occasionally. I have not seen this paper. 17 doubt ovarian cancer are highly prevalent in women worldwide. Environmental, hormonal, and viral-related factors are especially related to oxidative stress than 1 don't agree with it, 24 man suspicious whether it does or not. 8 whether it does or not. 9 MR. FROST: No. 12 MR. FROS	2	Again, I question whether	2	Q. This is on Oncotarget. Are
tumor suppressor genes. And I doubt that they did from the title.  The title.  BY MR. SMITH: Q. You doubt they did. You doubt they defined as in Female Cancers." And you're a reviewer of this Ducotarget, correct?  A. I didn't review this publication, no.  Q. You said that you were a reviewer of this Oncotarget is a journal, and I review papers for Oncotarget occasionally. I have not seen this paper.  Q. Okay. And it states, and ovarian cancer are highly prevalent in women worldwide. Environmental, hormonal, and ovarian cancer are highly prevalent in women worldwide. Environmental, hormonal the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are highly prevalent in wo	3	Reference 86 used oxidative stress	3	you familiar with Oncotarget?
5 tumor suppressor genes. And I doubt that they did from the title. 7 title. 8 BY MR. SMITH: 9 Q. You doubt they did. You don't know, correct? 10 don't know, correct? 11 MR. FROST: Objection. 12 THE WITNESS: No. Unless you have the paper. I'd be delighted to look at it. 15 BY MR. SMITH: 16 Q. And the statement talks about, "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers, including epithelial ovarian cancer." 12 Would you agree with that? 13 Would you agree with that? 14 Would you agree with that? 15 BY MR. FROST: Objection. 17 Would you agree with that? 18 Said that I don't agree with it, 24 wordwide. Environmental, hormonal, and viral-related factors are strongly relevant in the development of these tatement is reflected in the title of Number 86. So I'd have to see the paper. 1 Because I don't believe that that to see the paper. 2 But based upon the references that you've pointed me to already, I am suspicious whether it does or not. 3 MR. SMITH: Okay. Let's see. I don't think I marked that as an exhibit, did I? 2 MR. FROST: No. 3 MR. SMITH: I did something with my exhibit stickers. 4 With my exhibit stickers. 5 That's 26. 6 (Document marked for	4	insults to look at methylation of	4	A. Yes, I reviewed for them.
doubt that they did from the title.  8 BY MR. SMITH: 9 Q. You doubt they did. You 10 don't know, correct? 11 MR. FROST: Objection. 12 THE WITNESS: No. Unless 13 you have the paper. I'd be delighted to look at it. 15 BY MR. SMITH: 16 Q. And the statement talks 17 about, "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers, including epithelial ovarian cancer." 21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just said that I don't agree with it, 24 said that I don't agree with it, 25 But based upon the references that you've pointed me to already, I am suspicious whether it does or not.  8 Whether it does or not. 9 MR. SMITH: I did something with my exhibit stickers. 17 I don't think I marked that at that status of the organism and is literally defined as 'an imbalance in the redox as 'an imbalance in the redox as 'an imbalance in the redox ROS 'at taus of the organism and is literally defined as 'an imbalance in the redox in the decimal of the redox or not. That's 26. 16 (Document marked for	5	<del>-</del>	5	•
title.  By MR, SMITH: Q. You doubt they did. You  don't know, correct?  THE WITNESS: No. Unless you have the paper. I'd be delighted to look at it.  By MR, SMITH: Q. And the statement talks Q. O (kay. And it states, "Abstract: Breast, cervical, and ovarian cancer are highly prevalent in women worldwide. Environmental, hormonal, and viral-related factors are especially relevant in the development of these tumors. These factors are strongly related to oxidative stress through the generation of reactive oxygen species."  Page 299  Dega 30  Page 30	6		6	
8 BY MR. SMITH: 9 Q. You doubt they did. You 10 don't know, correct? 11 MR. FROST: Objection. 12 THE WITNESS: No. Unless 13 you have the paper. I'd be 14 delighted to look at it. 15 BY MR. SMITH: 16 Q. And the statement talks 17 about, "Oxidative stress has also been 18 shown to facilitate epigenetic mechanisms 19 in many cancers, including epithelial 20 ovarian cancer." 21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just 24 said that I don't agree with it, 25 Beause I don't believe that that 26 statement is reflected in the 27 to see the paper. 28 to see the paper. 29 Page 299 29 Page 30 20 Oxiay. Well, we'll read the whether it does or not. 30 Whether it does or not. 40 Whether it does or not. 41 Whole abstract. 42 MR. FROST: No. 43 MR. SMITH: I did something with my exhibit stickers. 44 Whole abstract. 45 A. Okay. 46 Oxay. Well, we'll read the whole abstract. 46 Oxay. Well, we'll read the whole abstract. 47 Whole abstract. 48 A. I didn't treview this publication, no. 49 Oxay. Well, we'll read the world where is a journal, and viral-related factors. I don't know what they're talking about here. But whole abstract. 49 Oxay. Well, we'll read the whole abstract. 40 Oxay. Well, we'll read the whole abstract. 40 Oxay. Well, we'll read the whole abstract. 41 Oxay. Well, we'll read the			7	
9 Q. You doubt they did. You 10 don't know, correct? 11 MR. FROST: Objection. 12 THE WITNESS: No. Unless 13 you have the paper. I'd be 14 delighted to look at it. 15 BY MR. SMITH: 16 Q. And the statement talks 17 about, "Oxidative stress has also been 18 shown to facilitate epigenetic mechanisms 19 in many cancers, including epithelial 20 ovarian cancer." 21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just 24 said that I don't agree with it, 25 By MR. SMITH: 26 Q. Okay. And it states, 27 "Abstract: Breast, cervical, and ovarian cancer are highly prevalent in women ovarian cancer." 20 viral-related factors are especially relevant in the development of these tumors. These factors are strongly temperature of the search of the paper. 28 The WITNESS: No. I just said that I don't agree with it, 29 But based upon the references that you've pointed me to already, I am suspicious whether it does or not. 30 MR. SMITH: Okay. Let's see. I don't think I marked that as an exhibit, did I? 31 MR. FROST: No. 32 MR. FROST: No. 33 MR. SMITH: I did something with my exhibit stickers. 34 With my exhibit stickers. 35 That's 26. 46 (Document marked for 36 Q. Vay. and it states, review papers for Oncotarget occasionally. I have not seen this paper. 36 Q. Okay. And it states, "Abstract: Breast, cervical, and ovarian cancer are highly prevalent in women cancer are highly prevalent in women to cancer are highly prevalent in women to cancer are highly prevalent in women to acaive worldwide. Environmental, hormonal, and viral-related factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly related to oxidative stress through the generation of reactive oxygen species."  Page 299  Page 30  Page	8		8	
don't know, correct?  MR. FROST: Objection.  THE WITNESS: No. Unless you have the paper. I'd be delighted to look at it.  BY MR. SMITH:  Q. And the statement talks about, "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers, including epithelial ovarian cancer."  Would you agree with that?  MR. FROST: Objection.  Page 299  Dege 300  Delay. And it states, and ovarian cancer are highly prevalent in women worldwide. Environmental, hormonal, an viral-related factors are especially relevant in the development of these tumors. These factors are strongly related to oxidative stress through the generation of reactive oxygen species."  Page 299  Dege 300  Page				
11 MR. FROST: Objection. 12 THE WITNESS: No. Unless 13 you have the paper. I'd be 14 delighted to look at it. 15 BY MR. SMITH: 16 Q. And the statement talks 17 about, "Oxidative stress has also been 18 shown to facilitate epigenetic mechanisms 19 in many cancers, including epithelial 20 ovarian cancer." 21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just 24 said that I don't agree with it, 25 Because I don't believe that that 26 to see the paper. 27 But based upon the 28 to see the paper. 29 MR. SMITH: 20 because I don't believe that that 21 because I don't believe that that 22 statement is reflected in the 23 to see the paper. 4 to already, I am suspicious 4 to already, I am suspicious 5 MR. SMITH: Okay. Let's 6 see. I don't think I marked that 11 as an exhibit, did I? 12 MR. SMITH: I did something 13 With my exhibit stickers. 14 Concotarget is a journal, and 14 viral-relate occasionally. I have not seen this 15 paper. 16 Q. Okay. And it states, 17 "Abstract: Breast, cervical, and ovarian 18 cancer are highly prevalent in women 19 worldwide. Environmental, hormonal, and viral-related factors are strongly related to oxidative stress through the generation of reactive oxygen species."  Page 299  Page 30  Page 4  Page 30  Page 30  Page 4  Page 4  Page 4  Page 30  Page 4  Page		· · · · · · · · · · · · · · · · · · ·	l	•
THE WITNESS: No. Unless you have the paper. I'd be delighted to look at it.  BY MR. SMITH:  Q. And the statement talks right ovarian cancer. I'd be ovarian cancer. I'  Would you agree with that?  MR. FROST: Objection.  The WITNESS: No. I just asid that I don't agree with it,  because I don't believe that that to see the paper.  But based upon the references that you've pointed me for references that you've pointed me for as an exhibit, did I?  MR. FROST: No. MR. SMITH:  A. Oncotarget is a journal, and I review papers for Oncotarget occasionally. I have not seen this paper.  Q. Okay. And it states, I'd abstract: Breast, cervical, and ovarian cancer are highly prevalent in women worldwide. Environmental, hormonal, an viral-related factors are especially relevant in the development of these tumors. These factors are strongly related to oxidative stress through the generation of reactive oxygen species."  Page 299  Page 30  Page 4  Page 30  Page 4				
you have the paper. I'd be delighted to look at it.  BY MR. SMITH:  Co. And the statement talks about, "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers, including epithelial ovarian cancer."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: No. I just said that I don't agree with it,  because I don't believe that that statement is reflected in the to already, I am suspicious whether it does or not.  MR. SMITH:  MR. FROST: No. MR. SMITH:				
delighted to look at it.  BY MR. SMITH:  Q. And the statement talks  range ovarian cancer."  Would you agree with that?  MR. FROST: Objection.  The Witnness Said that I don't agree with it,  because I don't believe that that statement is reflected in the to see the paper.  But based upon the references that you've pointed me for freences that you've pointed me for many canced, I as an exhibit, did I?  MR. SMITH:  Medighted to look at it.  14 occasionally. I have not seen this paper.  Q. Okay. And it states,  "Abstract: Breast, cervical, and ovarian cancer are singhly prevalent in women worldwide. Environmental, hormonal, an viral-related factors are especially relevant in the development of these tumors. These factors are strongly related to oxidative stress through the generation of reactive oxygen species."  Page 299  Page 30  Page 30  Would you agree with that?  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: These  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: These  factors okay. Environmental, hormonal, and viral-related factors. I don't know what they're talking about here. But they're  MR. SMITH: Okay. Let's  MR. SMITH: Okay. Let's  MR. SMITH: Okay. Let's  MR. FROST: No.  MR. SMITH: I did something  MR. SMITH: I did someth				
15 BY MR. SMITH: 16 Q. And the statement talks 17 about, "Oxidative stress has also been 18 shown to facilitate epigenetic mechanisms 19 in many cancers, including epithelial 20 ovarian cancer." 21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just 24 said that I don't agree with it, 25 statement is reflected in the 26 statement is reflected in the 27 to see the paper. 28 but based upon the 29 references that you've pointed me 20 references that you've pointed me 21 to already, I am suspicious 22 whether it does or not. 23 mR. SMITH: Okay. Let's 24 mR. FROST: No. 25 mR. FROST: No. 26 mR. SMITH: I did something 27 may be about to already it may be an exhibit, did I? 28 mR. FROST: No. 39 mR. SMITH: I did something 40 viral-related factors are especially 41 relevant in the development of these 42 tumors. These factors are strongly 43 related to oxidative stress through the 44 generation of reactive oxygen species."  **Page 299**  **Page 30**  **Page 30**				
Q. And the statement talks 17 about, "Oxidative stress has also been 18 shown to facilitate epigenetic mechanisms 19 in many cancers, including epithelial 20 ovarian cancer." 21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just 24 said that I don't agree with it, 25 Statement is reflected in the 26 statement is reflected in the 27 statement is reflected in the 28 to see the paper. 29 The Witness So I'd have 4 to see the paper. 4 to see the paper. 4 to see the paper. 5 But based upon the 6 references that you've pointed me 7 to already, I am suspicious 8 whether it does or not. 9 MR. SMITH: Okay. Let's 9 MR. SMITH: Okay. Let's 10 see. I don't think I marked that 11 as an exhibit, did I? 12 MR. FROST: No. 13 MR. SMITH: I did something 14 with my exhibit stickers. 15 That's 26. 16 (Document marked for 18 Q. Okay. And it states, 17 "Abstract: Breast, cervical, and ovarian cancer are highly prevalent in women 20 viral-related factors are especially relevant in the development of these 21 tumors. These factors are strongly related to oxidative stress through the 22 generation of reactive oxygen species."  Page 299  Page 30  Page 4  Swith fixed to oxidative stress through the generation of reactive oxygen species."  Page 4  Would you agree with that?  What feve that that 1  Page 4  Would you agree with that?  What feve the page and a stream the feve that that 1  Q. Okay. Environmental, hormonal, and viral-related factors are strongly related to oxidative stress in the yire and the strea				
about, "Oxidative stress has also been shown to facilitate epigenetic mechanisms in many cancers, including epithelial ovarian cancer."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: No. I just said that I don't agree with it,  Page 299  Page 30  Page 4  Page 4  Page 30  Page 4  P			l	
shown to facilitate epigenetic mechanisms in many cancers, including epithelial ovarian cancer."  Would you agree with that?  MR. FROST: Objection.  Page 299  Page 299  Page 30  Decause I don't believe that that statement is reflected in the status of the organism and is literally defined as 'an imbalance between ROS status of the organism and is literally defined as 'an imbalance between ROS		•		•
in many cancers, including epithelial ovarian cancer."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: No. I just said that I don't agree with it,  Page 299  Decause I don't believe that that statement is reflected in the to see the paper.  But based upon the references that you've pointed me references that oalready, I am suspicious  MR. SMITH: Okay. Let's MR. FROST: No. MR. SMITH: I did something Mr. Source with that?  Sural-related factors are especially relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these tumors. These factors are strongly relevant in the development of these  MR. FROST: No. I Would you agree with that? MR. FROST: Objection. The WITNESS: These factors - okay. Environmental, hormonal, and viral-related factors - okay. By MR. SMITH: Uklander - okay.  MR. FROST: O				
ovarian cancer."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: No. I just  asaid that I don't agree with it,  Page 299  Page 299  Page 30  Decause I don't believe that that  to see the paper.  But based upon the  references that you've pointed me  references that you've pointed me  make to already, I am suspicious  MR. SMITH: Okay. Let's  MR. FROST: No.  MR. SMITH: Okay. Let's  MR. FROST: No.  MR. FROST: No.  MR. SMITH: I did something  MR. SMITH: I did something  Mr. FROST: No.  MR. SMITH: I did something  MR. FROST: No.  MR. SMITH: I did something  Mr. The wiral-related factors are especially  relevant in the development of these  tumors. These factors are strongly  related to oxidative stress through the  see action of reactive oxygen species."  Page 30  Frost: Objection.  THE WITNESS: These  factors - okay. Environmental,  hormonal, and viral-related  factors. I don't know what  they're  BY MR. SMITH:  Q. Okay. Well, we'll read the  whole abstract.  A. Okay.  MR. SMITH: I did something  MR. SMITH: I did somet			l	
21 Would you agree with that? 22 MR. FROST: Objection. 23 THE WITNESS: No. I just 24 said that I don't agree with it,  25 Page 299  Page 299  Page 299  Page 30  1 because I don't believe that that 2 statement is reflected in the 3 title of Number 86. So I'd have 4 to see the paper. 4 but based upon the 5 But based upon the 6 references that you've pointed me 7 to already, I am suspicious 8 whether it does or not. 8 whether it does or not. 9 MR. SMITH: Okay. Let's 9 MR. SMITH: 10 see. I don't think I marked that 10 Q. Okay. Well, we'll read the 11 as an exhibit, did I? 12 MR. FROST: No. 13 MR. SMITH: I did something 14 with my exhibit stickers. 15 That's 26. 16 (Document marked for			l	
MR. FROST: Objection. THE WITNESS: No. I just said that I don't agree with it,  Page 299  Page 299  Page 299  Page 30  1 because I don't believe that that statement is reflected in the s				± •
THE WITNESS: No. I just 24 related to oxidative stress through the generation of reactive oxygen species."  Page 299  Page 30  because I don't believe that that statement is reflected in the 2 MR. FROST: Objection. Title of Number 86. So I'd have 3 THE WITNESS: These 4 to see the paper. 4 factors okay. Environmental, 5 But based upon the 5 hormonal, and viral-related 6 references that you've pointed me 6 factors. I don't know what 7 to already, I am suspicious 7 they're talking about here. But 8 whether it does or not. 8 they're MR. SMITH: Okay. Let's 9 BY MR. SMITH: 0 see. I don't think I marked that 10 Q. Okay. Well, we'll read the whole abstract. 12 MR. FROST: No. 12 A. Okay. 13 MR. SMITH: I did something 13 Q. "The oxidative stress is 14 with my exhibit stickers. 14 caused by an imbalance in the redox 15 That's 26. (Document marked for 16 defined as 'an imbalance between ROST. No. 16 defined as 'an imbalance between ROST. No. 17 defined as 'an imbalance between ROST. No. 18 defined as 'an imbalance between ROST. No. 19 defined as 'an imbalance between RO		, ,		
Page 299  Page 30  Decause I don't believe that that statement is reflected in the statement is				
Page 299  Decause I don't believe that that to see the paper.  MR. FROST: Objection. But based upon the references that you've pointed me to already, I am suspicious MR. SMITH: Okay. Let's MR. SMITH:  MR. FROST:  MR. SMITH:  MR. FROST:  MR. SMITH:  MR. SMITH:  MR. SMITH:  MR. SMITH:  MR. SMITH:  MR. FROST:  MR. SMITH:  MR. SMITH		•		
because I don't believe that that statement is reflected in the statement is reflected in the title of Number 86. So I'd have to see the paper.  But based upon the references that you've pointed me to already, I am suspicious whether it does or not.  MR. SMITH: Okay. Let's see. I don't think I marked that as an exhibit, did I?  MR. FROST: No.  MR. SMITH: I did something MR. SMITH: I did something MR. SMITH: I did something MR. SMITH: Occument marked for MR. SMITH: Occument marked for MR. SMITH: Occument marked for MR. SMITH: I did something MR. SMITH: I defined as 'an imbalance between ROS	24	said that I don't agree with it,	24	generation of reactive oxygen species."
1 because I don't believe that that 2 statement is reflected in the 3 title of Number 86. So I'd have 4 to see the paper. 5 But based upon the 6 references that you've pointed me 7 to already, I am suspicious 8 whether it does or not. 9 MR. SMITH: Okay. Let's 10 see. I don't think I marked that 11 as an exhibit, did I? 12 MR. FROST: No. 13 MR. SMITH: I did something 14 with my exhibit stickers. 15 That's 26. 16 (Document marked for		Dage 299		Dage 301
statement is reflected in the  ititle of Number 86. So I'd have  to see the paper.  But based upon the  references that you've pointed me  math and the see. I don't think I marked that  math as an exhibit, did I?  MR. FROST: Objection.  THE WITNESS: These  factors okay. Environmental,  hormonal, and viral-related  factors. I don't know what  they're talking about here. But  they're  MR. SMITH: Okay. Let's  MR. SMITH:  Double abstract.  MR. FROST: No.  MR. SMITH: I did something  MR. SMITH: I did something  MR. SMITH: I did something  That's 26.  (Document marked for  MR. FROST: No.  Judy A. Okay.  Caused by an imbalance in the redox  status of the organism and is literally  defined as 'an imbalance between ROSE  MR. FROST: No.  Judy A. Okay.  The oxidative stress is  status of the organism and is literally  defined as 'an imbalance between ROSE		_		
title of Number 86. So I'd have to see the paper.  But based upon the references that you've pointed me to already, I am suspicious  MR. SMITH: Okay. Let's see. I don't think I marked that as an exhibit, did I?  MR. SMITH: I did something  MR. SMITH: I d				
to see the paper.  But based upon the references that you've pointed me to already, I am suspicious  MR. SMITH: Okay. Let's see. I don't think I marked that as an exhibit, did I?  MR. SMITH: I did something  MR. SMITH: I did something with my exhibit stickers.  MR. SMITH: I did something  MR. SMITH: I did som				
But based upon the references that you've pointed me to already, I am suspicious  MR. SMITH: Okay. Let's see. I don't think I marked that mas an exhibit, did I?  MR. FROST: No. MR. SMITH: I did something MR. SM				
references that you've pointed me to already, I am suspicious whether it does or not.  MR. SMITH: Okay. Let's see. I don't think I marked that as an exhibit, did I?  MR. FROST: No.  MR. SMITH: I did something MR. SMITH: I did something  MR. SMITH: I did				
to already, I am suspicious  whether it does or not.  MR. SMITH: Okay. Let's  see. I don't think I marked that  as an exhibit, did I?  MR. FROST: No.  MR. SMITH: I did something  with my exhibit stickers.  That's 26.  (Document marked for  The whether it does or not.  BY MR. SMITH:  Q. Okay. Well, we'll read the  whole abstract.  A. Okay.  Q. "The oxidative stress is  caused by an imbalance in the redox  status of the organism and is literally  defined as 'an imbalance between ROS		•		
8whether it does or not.8they're9MR. SMITH: Okay. Let's9BY MR. SMITH:10see. I don't think I marked that10Q. Okay. Well, we'll read the11as an exhibit, did I?11whole abstract.12MR. FROST: No.12A. Okay.13MR. SMITH: I did something13Q. "The oxidative stress is14with my exhibit stickers.14caused by an imbalance in the redox15That's 26.15status of the organism and is literally16(Document marked for16defined as 'an imbalance between ROS			l	
9 MR. SMITH: Okay. Let's 10 see. I don't think I marked that 11 as an exhibit, did I? 12 MR. FROST: No. 13 MR. SMITH: I did something 14 with my exhibit stickers. 15 That's 26. 16 (Document marked for  19 BY MR. SMITH: 10 Q. Okay. Well, we'll read the whole abstract. 11 A. Okay. 12 A. Okay. 13 Q. "The oxidative stress is 14 caused by an imbalance in the redox 15 status of the organism and is literally 16 defined as 'an imbalance between ROS	7	1	7	
see. I don't think I marked that as an exhibit, did I?  MR. FROST: No.  MR. SMITH: I did something with my exhibit stickers. That's 26. (Document marked for  Description:  Q. Okay. Well, we'll read the whole abstract.  A. Okay. Q. "The oxidative stress is caused by an imbalance in the redox status of the organism and is literally defined as 'an imbalance between ROS			8	
11 as an exhibit, did I? 12 MR. FROST: No. 13 MR. SMITH: I did something 14 with my exhibit stickers. 15 That's 26. 16 (Document marked for 11 whole abstract. 12 A. Okay. 13 Q. "The oxidative stress is caused by an imbalance in the redox status of the organism and is literally defined as 'an imbalance between ROS	9	MR. SMITH: Okay. Let's	9	BY MR. SMITH:
MR. FROST: No.  MR. SMITH: I did something  with my exhibit stickers.  That's 26.  (Document marked for  MR. FROST: No.  12  A. Okay.  Q. "The oxidative stress is  caused by an imbalance in the redox  status of the organism and is literally  defined as 'an imbalance between ROS	10	see. I don't think I marked that	10	Q. Okay. Well, we'll read the
MR. SMITH: I did something with my exhibit stickers.  That's 26.  (Document marked for)  MR. SMITH: I did something 13 Q. "The oxidative stress is caused by an imbalance in the redox status of the organism and is literally defined as 'an imbalance between ROS	11	as an exhibit, did I?	11	whole abstract.
with my exhibit stickers.  14 caused by an imbalance in the redox 15 That's 26. 15 status of the organism and is literally 16 (Document marked for 16 defined as 'an imbalance between ROS	12	MR. FROST: No.	12	A. Okay.
<ul> <li>with my exhibit stickers.</li> <li>That's 26.</li> <li>(Document marked for</li> <li>taused by an imbalance in the redox status of the organism and is literally defined as 'an imbalance between ROS defined as</li></ul>	13	MR. SMITH: I did something	13	Q. "The oxidative stress is
That's 26. 15 status of the organism and is literally defined as 'an imbalance between ROS 16 to 15 status of the organism and is literally 16 to 16 defined as 'an imbalance between ROS 15 to 15 status of the organism and is literally 16 to 16 to 17 to 18 to 18 to 19 to	14		14	
16 (Document marked for 16 defined as 'an imbalance between ROS	15	•	15	•
	16	(Document marked for	1	
$  \perp  $ identification as Exhibit $  \perp  $ generation and its detoxification by	17	identification as Exhibit	17	generation and its detoxification by
18 Mossman-27.) 18 biological system, leading to the			1	
19 BY MR. SMITH: 19 impairment of damage repair by			1	
20 Q. I want to next this is 20 cells/tissue.'				
21 another 2018 article, and it has the NCBI 21 "The multi-step progression			1	
, and the second			1	of cancer suggests that oxidative stress
23 bottom. 23 is involved in cancer initiation,				
24 Do you see that, Doctor? 24 promotion, and progression. In this			1	
21 promotion, and progression. In this		Do you see mai, Doctor:		promotion, and progression. In this

76 (Pages 298 to 301)

1 review, we describe role of oxidative 2 stress and the interplay with 3 environmental, host, and viral factors 4 related to breast, cervical, and ovarian 5 cancers, initiation, promotion and 6 progression. 7 "In addition, the role of 8 natural antioxidant compounds, human and 9 other, compounds for breast, cervical, 10 and ovarian cancers' prevention/treatment 11 is discussed." 12 Do you see that? 13 A. Yes. This is a review. 14 Q. Do you agree with that 15 abstract? 16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We  10 Do you agree with that 2 statement? 3 A. I do. And as I emphasized 4 previously, reactive oxygen species are 4 known to be important in development in development in development in development in development and metastases.  9 Q. Of the ovary? 4 A. In late stage, yes. 4 Q. No, it doesn't say late 5 stage. It just says ovary. 4 Development is what happens in subsequen stages of cancer development. And so, as I emphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative stress or inflammation. Not causation. 9 Q. Go to the conclusions. It's doesn't say late 10 progression. That is not initiation. 11 Development is what happens in subsequen stages of cancer development. And so, as I emphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative stress or inflammation. Not causation. 10 Q. Go to the conclusions. It's doesn't say late 11 Stages of cancer development induced by oxidative stress or inflammation. Not causation. 12 Q. Go to the conclusions and remarks." 13 A. It says development and progression. That is not initiation. 14 Development is what happens in subsequent stages of cancer development. And so, as I				
stress and the interplay with environmental, host, and viral factors related to breast, cervical, and ovarian cancers, initiation, promotion and progression.  In addition, the role of natural antioxidant compounds, human and other, compounds for breast, cervical, and ovarian cancers' prevention/treatment is discussed."  Do you see that?  A. Yes. This is a review.  O. Do you agree with that abstract?  A. As what they're describing, red describing and see the references that support their statements.  O. Go to the conclusions. It's on Page 16 of 30, Doctor.  "Conclusions and remarks." And if you go down five lines, and you go all the way to the right, it says, "We  Page 303  Page 304  Page 305  Page 305  Page 305  Page 306  Page 306  Page 306  Page 307  Page 307  Page 308  Page 308  Page 308  Page 308  Page 309  Page		Page 302		Page 304
a environmental, host, and viral factors related to breast, cervical, and ovarian cancers, initiation, promotion and progression.  "In addition, the role of natural antioxidant compounds, human and other, compounds for breast, cervical, and ovarian cancers' prevention/treatment is discussed."  Do you see that?  A. Yes. This is a review.  Q. Do you agree with that abstract?  A. As what they're describing, If have to assume that's what they're describing and see the references that support their statements.  O. Go to the conclusions. It's on Page 16 of 30, Doctor.  "Conclusions and remarks."  And if you go down five lines, and you go all the way to the right, it says, "We  MR. FROST: It's 283 whatever.  MR. SMITH:  Q. And if you go down five lines and go to the right, it says, "We  A. I do. And as I emphasized previously, reactive oxygen species are known to be important in development in development in late stage tumor progression and metastases.  Q. Of the ovary?  A. In late stage, ves. Q. No, it doesn't say late stage. It just says ovary.  A. It ago development in development in late stage tumor progression and metastases.  Q. Of the ovary?  A. In late stage, ves. Q. No, it doesn't say late stage. It just says ovary.  Lass stage. It just says ovary.  A. It do. And as I emphasized previously, reactive oxygen species are known to be important in development in late stage tumor progression and metastases. Q. Of the ovary?  A. In late stage, ves. Q. No, it doesn't say late stage. It just says ovary.  Lass stage. It just says ovary.  A. It day development in levelopment and progression and metastases. Q. Of the ovary? A. In late stage tumor progression. That is not initiation. The stage tumor progression. That is not initiation. Development is what happens in subsequen stages of cancer development and progression. That is not initiation. Development is what happens in subsequen stages of cancer development and other tumors may be reflective of roles of late stage cancer development and other tumors of its effect	1	review, we describe role of oxidative	1	Do you agree with that
related to breast, cervical, and ovarian cancers, initiation, promotion and progression.  In addition, the role of natural antioxidant compounds, human and other, compounds for breast, cervical, and ovarian cancers' prevention/treatment is discussed."  Do you see that?  A. Yes. This is a review. Q. Do you agree with that abstract?  A. As what they're describing, I'd have to assume that's what they're describing and see the references that support their statements. Q. Go to the conclusions. It's on Page 16 of 30, Doctor.  "Conclusions and remarks."  And if you go down five in the Whattever. THE WITNESS: No. MR. FROST: Brooke, you go MR. FROST: It's 283 Whattever. THE WITNESS: No. MR. FROST: T- 5. BY MR. SMITH: Q. And if you go down five lines and go to the right, it says, "We  previously, reactive oxygen species are known to be important in development in late stage tumor progression and metastases.  Mentastases. Q. Of the ovary? A. In late stage, yes. Q. Or hat desarty a ylate stage. It just says ovary. A. It says development and progression. That is not initiation. Development is what happens in subsequent stages of cancer development. And so, as I emphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative strages of cancer development induced by oxidative stress or inflammation. Not causation.  Page 303  Page 305  Page 305  Page 305  Page 305  Page 305  Page 306  Page 307  Page 307  Page 308  Page 30	2	stress and the interplay with	2	statement?
5 cancers, initiation, promotion and 6 progression. 7 "In addition, the role of 8 natural antioxidant compounds, human and 9 other, compounds for breast, cervical, 10 and ovarian cancers' prevention/treatment 11 is discussed." 12 Do you see that? 13 A. Yes. This is a review. 14 Q. Do you agree with that 15 abstract? 16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We 25 The WiTNESS: No. 6 MR. FROST: Brooke, you go 7 MR. SMITH: 7 MR. SMITH: 8 MR. FROST: 1's 283 9 MR. SMITH: 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 12 Messan-2s.) 13 known to be important in development in late stage tmeatastage tmeatastage tmeatastage the metastases.  Q. Of the ovary?  A. In late stage, yes. Q. No, it doesn't say late stage. It just says ovary.  A. It says development and progression. That is not initiation. Development is what happens in subsequent stages of cancer development. And so, as 1 cmphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative stress or inflammation. Not causation.  (Document marked for identification as Exhibit Mossman-28.)  BY MR. SMITH:  1 exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is from the National Cancer Institute, Center Data Access System.  And it's "Inflammation Markers and Risk of Endometrial and Ovarian cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen.  Do you know who he is?  A. Is avage trage to a late stage. It just says, "We 11 lines and go to the right, it says,	3	environmental, host, and viral factors	3	A. I do. And as I emphasized
6 progression. 7 "In addition, the role of 8 natural antioxidant compounds, human and 9 other, compounds for breast, cervical, 10 and ovarian cancers' prevention/treatment 11 is discussed." 12 Do you see that? 13 A. Yes. This is a review. 14 Q. Do you agree with that 15 abstract? 16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We 25 THE WITNESS: No. 26 MR. FROST: It's 283 27 MR. SMITH: 28 MR. FROST: It's 283 39 MR. SMITH: 30 Q. And if you go down five 30 MR. FROST:5. 31 BY MR. SMITH: 32 MR. SMITH: 33 MR. SMITH: 44 Q. I marked that previous 45 Lestage tumor progression and metastases. 46 Q. Of the ovary? 4 A. In late stage, yes. 40 Q. No, it doesn't say late stage. If just says development and progression. That is not initiation. 4 It is a tays development and progression. That is not initiation. 4 It is and ovarian cancers' prevention/treatment in progression. That is not initiation. 4 It is a tays development and progression. That is not initiation. 5 It is progression. That is not initiation. 6 It is progression. That is not initiation. 6 It is obvious and other tumors may be reflective of roles of late stage cancer development. And so, as stages of cancer development induced by oxidative stress or inflammation. Not causation. 6 (Document marked for identification as Exhibit Mossman-28.) 8 BY MR. SMITH: 9 Exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is in next exhibit, which is 28. And this is in a study that is ongoing, and the principa	4	related to breast, cervical, and ovarian	4	previously, reactive oxygen species are
6 progression. 7 "In addition, the role of 8 natural antioxidant compounds, human and 9 other, compounds for breast, cervical, 10 and ovarian cancers' prevention/treatment 11 is discussed." 12 Do you see that? 13 A. Yes. This is a review. 14 Q. Do you agree with that 15 abstract? 16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We 25 THE WITNESS: No. 26 MR. FROST: It's 283 4 Whatever. 27 MR. SMITH: 28 MR. FROST: It's 283 4 MR. SMITH: 40 Q. And if you go down five 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 12 A. In late stage, ves. Q. No, it doesn't say late stage. 14 A. It says development and progression. That is not initiation. Development is what happens in subsequen stages of cancer development. And so, as stages of cancer development induced by oxidative stress or inflammation. Not causation. (Document marked for identification as Exhibit Mossman-28.) BY MR. SMITH: 2 exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is if from the National Cancer Institute, Center Data Access System. And it's "Inflammation Markers and Risk of Endometrial and Markers and Risk of Endometrial and Ovarian cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen. Do you know who he is? A. No, I've never heard of him. D. He's deputy branch chief and	5	cancers, initiation, promotion and	5	known to be important in development in
7 metastases.  8 natural antioxidant compounds, human and 9 other, compounds for breast, cervical, 10 and ovarian cancers' prevention/treatment 11 is discussed." 12 Do you see that? 13 A. Yes. This is a review. 14 Q. Do you agree with that 15 abstract? 16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 3 to ours doesn't say 16 or 4 whatever. 5 THE WITNESS: No, 6 MR. FROST: It's 283 7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 11 Interest and individed the recent progress." 10 Q. He's deputy branch chief and	6		6	
8 natural antioxidant compounds, human and other, compounds for breast, cervical, 9 other, compounds for breast, cervical, 10 and ovarian cancers' prevention/treatment 11 is discussed." 11 stage, yes. 12	7		7	
9 other, compounds for breast, cervical, 10 and ovarian cancers' prevention/treatment 11 is discussed." 12 Do you see that? 13 A. Yes. This is a review. 14 Q. Do you agree with that 15 abstract? 16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 19 Q. Go to the conclusions. It's 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says. "We 25 MR. FROST: Brooke, you go 36 MR. FROST: It's 283 4 MR. FROST: It's 283 5 MR. SMITH: 17 MR. SMITH: 19 20 Q. And if you go down five 21 Ines and go to the right, it says, "We 22 MR. SMITH: 9 23 MR. SMITH: 19 24 Whatever. 25 MR. FROST: Brooke, you go 26 MR. FROST: It's 283 7 MR. SMITH: 1'm sorry. 8 MR. FROST: -5. 9 BY MR. SMITH: 9 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 Ines and go to the right, it says, "We 13 A. In late stage, yes. 4 A. In late stage varies and sages of varies and sages. It just says evelopment and progression. That is not initiation. 14 A. It says development and progression. That is not initiation. 14 Development is what happens in subsequent stages of cancer development. And so, as I emphasize, ovarian and other tumors may be reflective of roles of late stage. 16 In emphasize, ovarian and other tumors may be reflective of roles of late stage. 18 cancer development induced by oxidative stress or inflammation. Not causation. 19 (Document marked for identification as Exhibit 19 Mossman-28.) 10 (Document marked for identification as Exhibit 19 Mossman-28.) 10 (Document marked for identification as Exhibit 10 Q. I marked that previous  11 mexet exhibit, which is 28. And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen. 10 Do you know who he is? 11 lines and go to the right, it says, "We 11 A. No, I've never heard of him. 11 Document marked for identification as Exhi	8		8	O. Of the ovary?
10 and ovarian cancers' prevention/treatment 11 is discussed." 12 Do you see that? 13 A. Yes. This is a review. 14 Q. Do you agree with that 15 abstract? 16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We 25 MR. FROST: Brooke, you go 3 to ours doesn't say 16 or 4 whatever. 5 THE WITNESS: No. 6 MR. FROST: I's 283 7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 12 Q. He's deputy branch chief and			9	· •
11 is discussed." 12 Do you see that? 13 A. Yes. This is a review. 14 Q. Do you agree with that 15 abstract? 16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We  Page 303  1 reviewed." 2 MR. FROST: Brooke, you go 3 to ours doesn't say 16 or 4 whatever. 5 THE WITNESS: No. 6 MR. FROST: It's 283 7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 11 lines and go to the right, it says, "We 12 reviewed the recent progress." 11 stage. It just says ovary. A. It says development and progression. That is not initiation. Development is what happens in subsequent stages of cancer development. And so, as 1 emphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative stress or inflammation. Not causation. (Document marked for identification as Exhibit Mosman-28.) BY MR. SMITH: 2 exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is from the National Cancer Institute, 2 exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is from the National Cancer Institute, 3 from the National Cancer Institute, 4 Center Data Access System. 5 THE WITNESS: No. 6 Markers and Risk of Endometrial and 6 Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen.  Do you know who he is? 1 lines and go to the right, it says, "We 1 A. No, I've never heard of him. 2 Q. He's deputy branch chief and		•	1	
Do you see that?  A. Yes. This is a review.  Q. Do you agree with that  A. Yes. This is a review.  Q. Do you agree with that  A. As what they're describing,  I'd have to assume that's what they're  describing and see the references that  support their statements.  Q. Go to the conclusions. It's  on Page 16 of 30, Doctor.  "Conclusions and remarks."  And if you go down five lines, and you go  all the way to the right, it says, "We  Page 303  reviewed."  Page 303  Page 304  Page 305  Page 305  Page 305  Page 306  Page 307  Page 308			1	•
A. Yes. This is a review.  Q. Do you agree with that  Q. Do you agree with that  A. As what they're describing,  I'd have to assume that's what they're  Bescribing and see the references that support their statements.  Q. Go to the conclusions. It's  Q. Go to the conclusions and remarks."  And if you go down five lines, and you go  I reviewed."  Page 303  Page 303  reviewed."  Page 303  reviewed."  Page 305  Reviewed."  Page 306  And it's "Inflammation  MR. FROST: It's 283  MR. SMITH: I'm sorry.  MR. SMITH:  MR. FROST: - 5.  BY MR. SMITH:  MR. FROST: - 5.  BY MR. SMITH:  MR. FROST: - 5.  BY MR. SMITH:  Development is what happens in subsequent stages of cancer development. And so, as I emphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative stress or inflammation. Not causation.  (Document marked for identification as Exhibit Mossman-28.)  BY MR. SMITH:  Q. I marked that previous  Page 305			1	
Q. Do you agree with that abstract?  A. As what they're describing, I'd have to assume that's what they're support their statements.  Q. Go to the conclusions. It's on Page 16 of 30, Doctor.  "Conclusions and remarks."  And if you go down five lines, and you go all the way to the right, it says, "We  Page 303  reviewed."  Page 303  reviewed."  Page 305  THE WITNESS: No. MR. FROST: It's 283 MR. SMITH: I'm sorry.  MR. FROST: 5.  BY MR. SMITH:  Movelopment is what happens in subsequen stages of cancer development. And so, as I emphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative stress or inflammation. Not causation.  (Document marked for identification as Exhibit Mossman-28.)  BY MR. SMITH: Q. I marked that previous  Page 305  exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is from the National Cancer Institute, Center Data Access System.  And it's "Inflammation Markers and Risk of Endometrial and MR. SMITH: I'm sorry.  MR. FROST: 5.  BY MR. SMITH:  Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen.  Q. And if you go down five lines and go to the right, it says, "We  12 Page 305  A. No, I've never heard of him. Q. He's deputy branch chief and				
abstract?  A. As what they're describing, I'd have to assume that's what they're describing and see the references that support their statements.  O. Go to the conclusions. It's recording and if you go down five lines, and you go all the way to the right, it says, "We  Page 303  reviewed."  Page 303  reviewed."  I emphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative stress or inflammation. Not causation. O(Document marked for identification as Exhibit Mossman-28.) BY MR. SMITH: A. A. As what they're describing, I emphasize, ovarian and other tumors may be reflective of roles of late stage cancer development induced by oxidative stress or inflammation. Not causation. O(Document marked for identification as Exhibit Mossman-28.) BY MR. SMITH:  Q. I marked that previous  Page 305  Page 305  Page 305  Page 305  Page 305  Page 305  Fage 305  And it's "Inflammation MR. FROST: It's 283 And it's "Inflammation MR. FROST: It's 283 And it's "Inflammation MR. SMITH: I'm sorry. MR. SMITH: Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen. O. And if you go down five Ines and go to the right, it says, "We Ines and go for an an analysi				
16 A. As what they're describing, 17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We 25 And it's "Inflammation 26 And it's "Inflammation 27 MR. FROST: It's 283 28 MR. FROST: It's 283 29 And if you go down five 20 MR. FROST: -5. 21 Emphasize, ovarian and other tumors may be reflective of roles of late stage 26 cancer development induced by oxidative stress or inflammation. Not causation. 29 (Document marked for identification as Exhibit 20 (Document marked for identification as Exhibit 21 Mossman-28.) 22 Mossman-28.) 23 BY MR. SMITH: 24 Q. I marked that previous 25 Page 305 26 Page 305 27 Center Data Access System. 28 And it's "Inflammation 29 Markers and Risk of Endometrial and Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen. 30 Q. And if you go down five 31 lines and go to the right, it says, "We 31 lines and go to the right, it says, "We 31 lines and go to the right, it says, "We 31 lines and go to the right, it says, "We 32 depth described by oxidative cancer development induced by oxidative stress or inflammation. Not causation. 32 (Document marked for identification as Exhibit. 34 Mossman-28.) 35 BY MR. SMITH: 36 Page 305 36 Page 305 37 Page 305 38 Page 305 4 Center Data Access System. 5 And it's "Inflammation 5 And it's "Inflammation 6 Markers and Risk of Endometrial and 7 Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen. 36 Page 305 37 Page 305 4 Pa		` •	1	* **
17 I'd have to assume that's what they're 18 describing and see the references that 19 support their statements. 20 Q. Go to the conclusions. It's 21 on Page 16 of 30, Doctor. 22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We 25 MR. FROST: Brooke, you go 36 to ours doesn't say 16 or 4 whatever. 5 THE WITNESS: No. 6 MR. FROST: I's 283 7 MR. SMITH: I'm sorry. 8 MR. SMITH: I'm sorry. 9 BY MR. SMITH: 9 Exhibit as 27. I'm going to mark the 10 Naries and Risk of Endometrial and 11 Markers and Risk of Endometrial and 12 MR. SMITH: I'm sorry. 13 Markers and Risk of Endometrial and 14 MR. SMITH: I'm sorry. 15 BY MR. SMITH: I'm sorry. 16 MR. FROST: -5. 17 MR. SMITH: I'm sorry. 18 MR. SMITH: I'm sorry. 19 BY MR. SMITH: I'm sorry. 20 (Document marked for 21 identification as Exhibit 22 Mossman-28.) 23 BY MR. SMITH: 24 Q. I marked that previous  Page 305  Page 40  Page 305  Page 40  Page 305  Page 40  Page 305  P			1	
describing and see the references that support their statements.  Q. Go to the conclusions. It's on Page 16 of 30, Doctor.  "Conclusions and remarks."  And if you go down five lines, and you go all the way to the right, it says, "We  Page 303  reviewed."  MR. FROST: Brooke, you go to ours doesn't say 16 or whatever.  THE WITNESS: No. MR. FROST: It's 283 MR. SMITH: I'm sorry. MR. FROST: 5. MR. SMITH: Markers and Risk of Endometrial and MR. SMITH: Markers and Risk of Endometrial and MR. SMITH: Markers and Risk of Endometrial and MR. SMITH: Markers and go to the right, it says, "We  Reviewed the recent progress."  I accence development induced by oxidative stress or inflammation. Not causation.  Chocument marked for identification as Exhibit Mossman-28.)  BY MR. SMITH:  Mossman-28.)  BY MR. SMITH:  Exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is from the National Cancer Institute, Center Data Access System.  And it's "Inflammation Markers and Risk of Endometrial and Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen.  Do you know who he is?  A. No, I've never heard of him.  Q. He's deputy branch chief and			1	
support their statements.  Q. Go to the conclusions. It's on Page 16 of 30, Doctor.  "Conclusions and remarks."  And if you go down five lines, and you go all the way to the right, it says, "We  Page 303  reviewed."  MR. FROST: Brooke, you go to ours doesn't say 16 or whatever.  THE WITNESS: No. MR. FROST: It's 283 MR. SMITH: I'm sorry. MR. FROST: 5. MR. FROST: 5. MR. FROST: 5. MR. FROST: Stays, "We  Stress or inflammation. Not causation. (Document marked for identification as Exhibit Mossman-28.)  BY MR. SMITH:  Q. I marked that previous  Page 305  And it's "Imflammation Cancer Institute, Center Data Access System.  Markers and Risk of Endometrial and Ovarian Cancer." And this is in a study MR. FROST: 5. Markers and Risk of Endometrial and Ovarian Cancer." And this is in a study MR. FROST: 5. MR. SMITH: MR. S		<del>-</del>		ĕ
Q. Go to the conclusions. It's  1		•		
on Page 16 of 30, Doctor.  21 identification as Exhibit  22 "Conclusions and remarks."  23 And if you go down five lines, and you go 24 all the way to the right, it says, "We  Page 303  Page 305  1 reviewed."  1 exhibit as 27. I'm going to mark the 2 MR. FROST: Brooke, you go 3 from the National Cancer Institute, 4 whatever. 4 Center Data Access System. 5 THE WITNESS: No. 6 MR. FROST: It's 283 7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress."  21 identification as Exhibit Mossman-28.)  BY MR. SMITH: 22 Mossman-28.)  BY MR. SMITH: 23 Hy MR. SMITH: 24 Q. I marked that previous  Page 305  And it says, "We 11 A. No, I've never heard of him. 12 Q. He's deputy branch chief and			1	
22 "Conclusions and remarks." 23 And if you go down five lines, and you go 24 all the way to the right, it says, "We 25 Page 303  1 reviewed." 26 MR. FROST: Brooke, you go 27			1	`
And if you go down five lines, and you go all the way to the right, it says, "We  Page 303  Page 305  reviewed."  MR. FROST: Brooke, you go to ours doesn't say 16 or MR. FROST: It's 283 MR. FROST: It's 283 MR. FROST: It's 283 MR. SMITH: I'm sorry. MR. SMITH: I'm sorry. MR. SMITH: I'm sorry. MR. FROST: 5. MR. SMITH: MR. SMI			1	
24 all the way to the right, it says, "We  Page 303  reviewed."  MR. FROST: Brooke, you go  to ours doesn't say 16 or  whatever.  THE WITNESS: No.  MR. FROST: It's 283  MR. SMITH: I'm sorry.  MR. FROST: 5.  BY MR. SMITH:  Q. I marked that previous  Page 305  exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is from the National Cancer Institute, Center Data Access System.  And it's "Inflammation Markers and Risk of Endometrial and Markers and Risk of Endometrial and Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen.  Q. And if you go down five lines and go to the right, it says, "We lines and go to the right, it says, "We lines and go to the right, it says, "We lines deputy branch chief and				· · · · · · · · · · · · · · · · · · ·
Page 303  1 reviewed."  2 MR. FROST: Brooke, you go 3 to ours doesn't say 16 or 4 whatever.  5 THE WITNESS: No. 6 MR. FROST: It's 283 7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress."  1 exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is 1 center Data Access System. 1 Center Data Access System. 1 And it's "Inflammation Markers and Risk of Endometrial and Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen. Do you know who he is? A. No, I've never heard of him. Q. He's deputy branch chief and				
1 reviewed." 2 MR. FROST: Brooke, you go 3 to ours doesn't say 16 or 4 whatever. 5 THE WITNESS: No. 6 MR. FROST: It's 283 7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress." 1 exhibit as 27. I'm going to mark the next exhibit, which is 28. And this is next exhibit.	24	all the way to the right, it says, "We	24 	Q. I marked that previous
MR. FROST: Brooke, you go  to ours doesn't say 16 or  whatever.  THE WITNESS: No.  MR. FROST: It's 283  MR. SMITH: I'm sorry.  MR. FROST: 5.  BY MR. SMITH:  Q. And if you go down five  lines and go to the right, it says, "We  lines and go to the recent progress."  2 next exhibit, which is 28. And this is  And this is 28. And this is  Mr. FROST is 283  Markers and Risk of Endometrial and  Markers and Risk of Endometrial and  Ovarian Cancer." And this is in a study  that is ongoing, and the principal investigator is Nicolas Wentzensen.  Do you know who he is?  A. No, I've never heard of him.  Q. He's deputy branch chief and		Page 303		Page 305
MR. FROST: Brooke, you go  to ours doesn't say 16 or  whatever.  THE WITNESS: No.  MR. FROST: It's 283  MR. SMITH: I'm sorry.  MR. FROST: 5.  MR. SMITH:  Q. And if you go down five  lines and go to the right, it says, "We  lines with the National Cancer Institute,  Center Data Access System.  And it's "Inflammation  Markers and Risk of Endometrial and  Ovarian Cancer." And this is in a study  that is ongoing, and the principal  investigator is Nicolas Wentzensen.  Do you know who he is?  A. No, I've never heard of him.  Q. He's deputy branch chief and	1	reviewed."	1	exhibit as 27. I'm going to mark the
to ours doesn't say 16 or whatever.  THE WITNESS: No.  MR. FROST: It's 283 MR. SMITH: I'm sorry.  MR. FROST: 5.  BY MR. SMITH:  Q. And if you go down five lines and go to the right, it says, "We lines and go to the recent progress."  THE WITNESS: No. Center Data Access System.  And it's "Inflammation Markers and Risk of Endometrial and Ovarian Cancer." And this is in a study that is ongoing, and the principal investigator is Nicolas Wentzensen. Do you know who he is?  A. No, I've never heard of him.  Q. He's deputy branch chief and	2	MR. FROST: Brooke, you go	2	next exhibit, which is 28. And this is
4 whatever. 5 THE WITNESS: No. 6 MR. FROST: It's 283 7 MR. SMITH: I'm sorry. 7 Ovarian Cancer." And this is in a study 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress." 4 Center Data Access System. 5 And it's "Inflammation 6 Markers and Risk of Endometrial and 7 Ovarian Cancer." And this is in a study 8 that is ongoing, and the principal investigator is Nicolas Wentzensen. 9 Do you know who he is? 11 A. No, I've never heard of him. 12 Q. He's deputy branch chief and	3		3	from the National Cancer Institute,
6 MR. FROST: It's 283 7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress." 6 Markers and Risk of Endometrial and 7 Ovarian Cancer." And this is in a study 8 that is ongoing, and the principal investigator is Nicolas Wentzensen. 9 Do you know who he is? 11 A. No, I've never heard of him. 12 Q. He's deputy branch chief and	4	whatever.	4	Center Data Access System.
6 MR. FROST: It's 283 7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress." 6 Markers and Risk of Endometrial and 7 Ovarian Cancer." And this is in a study 8 that is ongoing, and the principal investigator is Nicolas Wentzensen. 9 Do you know who he is? 11 A. No, I've never heard of him. 12 Q. He's deputy branch chief and	5	THE WITNESS: No.	5	
7 MR. SMITH: I'm sorry. 8 MR. FROST: 5. 9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress." 7 Ovarian Cancer." And this is in a study 8 that is ongoing, and the principal 10 investigator is Nicolas Wentzensen. 10 Do you know who he is? 11 A. No, I've never heard of him. 12 Q. He's deputy branch chief and		MR. FROST: It's 283	6	Markers and Risk of Endometrial and
8 MR. FROST: 5. 9 BY MR. SMITH: 9 investigator is Nicolas Wentzensen. 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress."  8 that is ongoing, and the principal investigator is Nicolas Wentzensen. 10 Do you know who he is? 11 A. No, I've never heard of him. 12 Q. He's deputy branch chief and	7		7	Ovarian Cancer." And this is in a study
9 BY MR. SMITH: 10 Q. And if you go down five 11 lines and go to the right, it says, "We 12 reviewed the recent progress."  9 investigator is Nicolas Wentzensen. 10 Do you know who he is? 11 A. No, I've never heard of him. 12 Q. He's deputy branch chief and	8		8	
10 Q. And if you go down five 10 Do you know who he is? 11 lines and go to the right, it says, "We 11 A. No, I've never heard of him. 12 reviewed the recent progress." 12 Q. He's deputy branch chief and			1	
lines and go to the right, it says, "We reviewed the recent progress."  A. No, I've never heard of him.  Q. He's deputy branch chief and			10	
reviewed the recent progress." 12 Q. He's deputy branch chief and		` ; ;	11	
= - 1			I	
A. "Recent progress towards the 14 of cancer epidemiology and genetics,			I	
potential role." Okay.  15 potential role." Okay.  15 clinical genetics branch.			I	
16 Q. "We reviewed the recent 16 Did you know that?			I	_
progress towards the potential role of 17 A. I didn't.		*	I	
18 ROS and associated oxygen" excuse 18 Q. Okay. And here's a study			1	
19 me "oxidative stress in the 19 that's ongoing at the NCI. And here is			1	
20 carcinogenesis" "in carcinogenesis 20 the title and the summary.				
21 since they are involved in the 21 "Title, Inflammation Markers			I	
22 development and progression of several 22 and Risk of Endometrial and Ovarian			I	
				Cancer. Epidemiology evidence suggests
24 ovary."  24 that chronic inflammation plays an			I	
	7.4			wise chichic inflammation DIG vo all

	Page 306		Page 308
1	important role in the pathogenesis of the	1	MR. FROST: This one was 28,
2	endometrial and ovarian cancers."	2	or this one's 29?
3	Do you agree with that	3	MR. SMITH: Excuse me. The
4	statement?	4	last one was 28.
5	MR. FROST: Objection.	5	(Document marked for
6	THE WITNESS: Yes. In late	6	identification as Exhibit
7	stage disease.	7	Mossman-29.)
8	BY MR. SMITH:	8	BY MR. SMITH:
9	Q. It says, "An important role	9	Q. This is 29. This is a 2008
10	in the" what does pathogenesis means?	10	article. It says, "Inflammation is a key
11	A. Pathogenesis means the	11	contributor to ovarian cancer cell
12	development of lesions as they go from an	12	seating."
13	initiated cell to later stages of cancer	13	Do you see that, Doctor?
14	development. So pathogenesis does not	14	A. I do.
15	encompass causation. It's the	15	Q. And if you flip to the
16	development of the tumors over periods of	16	the last page on the conclusion. In the
17	time. So it's the tissue changes that	17	final paragraph, two, four, six, seven
18	become evidenced after cancers are	18	lines down. Far right. "Our data in a
19	initiated.	19	mouse model are consistent with the
20	Q. "Chronic inflammation can	20	concept that most factors implicated in
21	induce rapid cell division, increasing	21	ovarian cancer incidence converge on
22	the possibility of replication error,	22	inflammation as a common denominator."
23	ineffective DNA repair, and subsequent	23	Do you agree or disagree
24	mutation. Risk factors for endometrial	24	with that statement?
	metation. Alsk factors for eliquinetral		with that statement:
	Page 307		Page 309
1	cancer: Unopposed estrogen use,	1	A. A mouse model. Most of the
2	anovulation, polycystic ovarian syndrome,	2	factors
3	excessive/prolonged menstruation,	3	Q. They performed a mouse model
4	diabetes and obesity, and conditions	4	in this study.
5	* 4 * 4 * 5 * * * * * * * * * * * * * *	_	
_	associated with ovarian cancer:	5	A. Yes. Inflammation is a
6	associated with ovarian cancer:  Ovulation, pelvic inflammatory disease,		
		5	A. Yes. Inflammation is a
6	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic	5 6	A. Yes. Inflammation is a common denominator of the pathogenesis,
6 7	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc	5 6 7	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these
6 7 8	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?	5 6 7 8	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when
6 7 8 9 10 11	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."	5 6 7 8 9 10 11	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of
6 7 8 9 10	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?	5 6 7 8 9	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So
6 7 8 9 10 11	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.	5 6 7 8 9 10 11	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of
6 7 8 9 10 11	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is	5 6 7 8 9 10 11 12	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage
6 7 8 9 10 11 12 13	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant	5 6 7 8 9 10 11 12 13	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers,
6 7 8 9 10 11 12 13	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed	5 6 7 8 9 10 11 12 13 14	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.
6 7 8 9 10 11 12 13 14	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed study. And I would not agree with	5 6 7 8 9 10 11 12 13 14 15	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.  Q. It says, "Our data in a
6 7 8 9 10 11 12 13 14 15	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed study. And I would not agree with the statement that exposure to	5 6 7 8 9 10 11 12 13 14 15 16	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.  Q. It says, "Our data in a mouse model are consistent with the
6 7 8 9 10 11 12 13 14 15 16 17	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed study. And I would not agree with the statement that exposure to talc is associated with chronic	5 6 7 8 9 10 11 12 13 14 15 16 17	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.  Q. It says, "Our data in a mouse model are consistent with the concept that most of the factors
6 7 8 9 10 11 12 13 14 15 16 17	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed study. And I would not agree with the statement that exposure to talc is associated with chronic inflammation.	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.  Q. It says, "Our data in a mouse model are consistent with the concept that most of the factors implicated in ovarian cancer incidence
6 7 8 9 10 11 12 13 14 15 16 17 18	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed study. And I would not agree with the statement that exposure to talc is associated with chronic inflammation.  BY MR. SMITH:	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.  Q. It says, "Our data in a mouse model are consistent with the concept that most of the factors implicated in ovarian cancer incidence converge on inflammation as a common
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed study. And I would not agree with the statement that exposure to talc is associated with chronic inflammation.  BY MR. SMITH:  Q. Okay.	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.  Q. It says, "Our data in a mouse model are consistent with the concept that most of the factors implicated in ovarian cancer incidence converge on inflammation as a common denominator. One successful path to
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed study. And I would not agree with the statement that exposure to talc is associated with chronic inflammation.  BY MR. SMITH:  Q. Okay.  A. No.	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.  Q. It says, "Our data in a mouse model are consistent with the concept that most of the factors implicated in ovarian cancer incidence converge on inflammation as a common denominator. One successful path to ovarian cancer prevention has been
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Ovulation, pelvic inflammatory disease, PCOS, endometriosis and exposure to talc and asbestos are associated with chronic inflammation."  Would you agree with that?  MR. FROST: Objection.  THE WITNESS: Again, this is a it looks like a grant application here. A proposed study. And I would not agree with the statement that exposure to talc is associated with chronic inflammation.  BY MR. SMITH:  Q. Okay.  A. No.  Q. Let's next go to	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Yes. Inflammation is a common denominator of the pathogenesis, especially late stage, and what these individuals are showing is that when cells are seated in metastases, inflammation becomes important. So that's not inconsistent with the role of oxidants or inflammation in late stage development or metastases of cancers, including ovarian.  Q. It says, "Our data in a mouse model are consistent with the concept that most of the factors implicated in ovarian cancer incidence converge on inflammation as a common denominator. One successful path to ovarian cancer prevention has been controlling factors that induce

e with that? C: Objection. ESS: I think there is that oral recome important, en. So it's one  ogic data show remonsteroidal rigs, NSAIDs, can be rention of multiple varian. Although the increased is aging and prevented, the risk appressing	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	appeared, or are relevant to causation of ovarian cancer by talc.  Q. Also, I marked as Exhibit 30.  (Document marked for identification as Exhibit Mossman-30.)  THE WITNESS: 30 is?  MR. FROST: It's coming up. He hasn't handed it over yet.  THE WITNESS: Okay.  MR. SMITH: Another interesting copy job. BY MR. SMITH:
ESS: I think there is that oral ecome important, en. So it's one ogic data show remonsteroidal ags, NSAIDs, can be vention of multiple varian. Although the increased saging and prevented, the risk	2 3 4 5 6 7 8 9 10 11 12 13 14 15	ovarian cancer by talc. Q. Also, I marked as Exhibit 30. (Document marked for identification as Exhibit Mossman-30.) THE WITNESS: 30 is? MR. FROST: It's coming up. He hasn't handed it over yet. THE WITNESS: Okay. MR. SMITH: Another interesting copy job. BY MR. SMITH:
ESS: I think there is that oral recome important, en. So it's one round ogic data show an nonsteroidal rigs, NSAIDs, can be rention of multiple varian. Although the increased is aging and prevented, the risk	3 4 5 6 7 8 9 10 11 12 13 14	Q. Also, I marked as Exhibit 30.  (Document marked for identification as Exhibit Mossman-30.)  THE WITNESS: 30 is?  MR. FROST: It's coming up. He hasn't handed it over yet.  THE WITNESS: Okay.  MR. SMITH: Another interesting copy job. BY MR. SMITH:
s that oral ecome important, en. So it's one  ogic data show r nonsteroidal lags, NSAIDs, can be vention of multiple varian. Although ith the increased s aging and prevented, the risk	4 5 6 7 8 9 10 11 12 13 14 15	Exhibit 30.  (Document marked for identification as Exhibit Mossman-30.)  THE WITNESS: 30 is?  MR. FROST: It's coming up.  He hasn't handed it over yet.  THE WITNESS: Okay.  MR. SMITH: Another interesting copy job.  BY MR. SMITH:
ecome important, en. So it's one  ogic data show r nonsteroidal ags, NSAIDs, can be vention of multiple varian. Although ith the increased s aging and prevented, the risk	5 6 7 8 9 10 11 12 13 14 15	(Document marked for identification as Exhibit Mossman-30.)  THE WITNESS: 30 is?  MR. FROST: It's coming up.  He hasn't handed it over yet.  THE WITNESS: Okay.  MR. SMITH: Another interesting copy job.  BY MR. SMITH:
ogic data show r nonsteroidal ags, NSAIDs, can be vention of multiple varian. Although the increased s aging and prevented, the risk	6 7 8 9 10 11 12 13 14 15	identification as Exhibit Mossman-30.) THE WITNESS: 30 is? MR. FROST: It's coming up. He hasn't handed it over yet. THE WITNESS: Okay. MR. SMITH: Another interesting copy job. BY MR. SMITH:
ogic data show r nonsteroidal lgs, NSAIDs, can be vention of multiple varian. Although ith the increased s aging and prevented, the risk	7 8 9 10 11 12 13 14 15	Mossman-30.) THE WITNESS: 30 is? MR. FROST: It's coming up. He hasn't handed it over yet. THE WITNESS: Okay. MR. SMITH: Another interesting copy job. BY MR. SMITH:
r nonsteroidal ags, NSAIDs, can be vention of multiple varian. Although ith the increased s aging and prevented, the risk	8 9 10 11 12 13 14 15	THE WITNESS: 30 is? MR. FROST: It's coming up. He hasn't handed it over yet. THE WITNESS: Okay. MR. SMITH: Another interesting copy job. BY MR. SMITH:
r nonsteroidal ags, NSAIDs, can be vention of multiple varian. Although ith the increased s aging and prevented, the risk	9 10 11 12 13 14 15	MR. FROST: It's coming up. He hasn't handed it over yet. THE WITNESS: Okay. MR. SMITH: Another interesting copy job. BY MR. SMITH:
r nonsteroidal ags, NSAIDs, can be vention of multiple varian. Although ith the increased s aging and prevented, the risk	10 11 12 13 14 15	He hasn't handed it over yet.  THE WITNESS: Okay.  MR. SMITH: Another interesting copy job.  BY MR. SMITH:
yention of multiple varian. Although ith the increased s aging and prevented, the risk	11 12 13 14 15	THE WITNESS: Okay.  MR. SMITH: Another interesting copy job. BY MR. SMITH:
vention of multiple varian. Although ith the increased s aging and prevented, the risk	12 13 14 15	MR. SMITH: Another interesting copy job. BY MR. SMITH:
varian. Although ith the increased s aging and prevented, the risk	13 14 15	interesting copy job. BY MR. SMITH:
ith the increased s aging and prevented, the risk	14 15	BY MR. SMITH:
s aging and prevented, the risk	15	
prevented, the risk		
		Q. You are familiar with this
ippressing	1	study, are you not, Doctor?
	17	MR. FROST: Is that more
1d d (0	18	than one copy or is it
e with that?	19	MR. SMITH: Here you go.
ree with the	20	MR. FROST: Okay. Thank
it inflammation	21	you.
late stage disease.	22	MR. SMITH: Yeah.
say late stage	23	BY MR. SMITH:
r <b>.</b>	24	Q. This was listed in your
Page 311		Page 313
Objection.	1	updated reference materials, correct?
SS: No. And they	2	A. Yes.
on either.	3	Q. "Analgesic use" "use and
ing about	4	ovarian cancer risk: An analysis of
here could be	5	ovarian cancer cohort consortium,"
nich inflammation	6	Trabert. It's in 2018. This isn't a
established	7	decade ago, is it?
	8	A. No. It's an update to their
	9	earlier study.
28, or 27, were	10	Q. And it says conclusions on
were any of those	11	the second page. "This large,
erials that you	12	prospective analysis suggests that women
or your opinion in	13	who use aspirin daily have a slightly
	14	lower risk of developing ovarian cancer,
in slowly.	15	10 percent lower than infrequent/nonuse,
ibits that we	16	similar to the risk reduced"
through 29, are	17	"reduction observed in case-control
<u> </u>	18	analyses. The observed potential
TOTOTICE ITIALCHIAIS	19	elevated risk for ten plus years of
		frequent aspirin and NSAID use require
your opinion in		further study, but could be due to
your opinion in		confounding by medical indications for
your opinion in nphasized, I	1	use in variation and drug dozing."
your opinion in nphasized, I yed original data in	43	
2 1	28, or 27, were were any of those erials that you r your opinion in in slowly. bits that we through 29, are ference materials your opinion in aphasized, I ed original data in	8 9 28, or 27, were 10 were any of those erials that you 12 r your opinion in 13 in slowly. 15 bits that we 16 through 29, are ference materials 18 rour opinion in 19 20 aphasized, I 21

	Page 314		Page 316
1	to your deposition today; is that	1	But I've gone through and
2	correct?	2	taken quotes out of different studies.
3	A. I did.	3	You stated earlier that you
4	Q. Okay. All right. Let's	4	did not go through the draft screening
5	talk about transmigration.	5	assessment of Health Canada, correct,
6	MR. FROST: One second. Do	6	when we were talking about inflammation?
7	you want to take a quick?	7	A. That's correct.
8	MR. SMITH: Sure.	8	Q. And so, the quote, "This
9	MR. FROST: I can use the	9	evidence of retrograde transport supports
10	restroom.	10	the biological plausibility of the
11	THE VIDEOGRAPHER: We're	11	association between perineal talc
12	going off the record. The time is	12	application and ovarian exposure."
13	2:43.	13	Would you agree or disagree
14	(Short break.)	14	with that statement?
15	THE VIDEOGRAPHER: We are	15	MR. FROST: Objection to
16		16	form.
17	going back on record. Beginning Media File Number 4. The time is	17	
18	2:54.	18	THE WITNESS: Yeah, I would
19	2:34. BY MR. SMITH:	19	disagree. There's no evidence of
20			retrograde talc transfer. BY MR. SMITH:
	Q. Okay. Doctor, this is going	20 21	
21	to be one of those situations again. I	22	Q. And we went over, earlier
22	apologize. And I'm we can read the		you had not reviewed Taher, and the quote
23	front together, but we can't read the	23	here, "Particles of talc appeared to
24	back together.	24	migrate into the pelvis and ovarian
	- 015		
	Page 315		Page 317
1	Page 315 And	1	
1 2		1 2	Page 317 tissue causing irritation and inflammation."
	And	1	tissue causing irritation and
2	And MR. SMITH: Here. I'm going	2	tissue causing irritation and inflammation."
2	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am	2 3	tissue causing irritation and inflammation."  Would you agree or disagree
2 3 4	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.	2 3 4	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?
2 3 4 5	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31. (Document marked for	2 3 4 5	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.
2 3 4 5 6	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31. (Document marked for identification as Exhibit	2 3 4 5 6	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would
2 3 4 5 6 7	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31. (Document marked for identification as Exhibit Mossman-31.)	2 3 4 5 6 7	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown
2 3 4 5 6 7 8	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of	2 3 4 5 6 7 8	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his
2 3 4 5 6 7 8 9	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to	2 3 4 5 6 7 8 9	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.
2 3 4 5 6 7 8 9 10 11 12	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of	2 3 4 5 6 7 8 9 10 11 12	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of
2 3 4 5 6 7 8 9 10	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object	2 3 4 5 6 7 8 9 10	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.
2 3 4 5 6 7 8 9 10 11 12 13 14	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document	2 3 4 5 6 7 8 9 10 11 12	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.)  MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that	2 3 4 5 6 7 8 9 10 11 12 13	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it,
2 3 4 5 6 7 8 9 10 11 12 13 14	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that MR. SMITH: Sure.	2 3 4 5 6 7 8 9 10 11 12 13 14	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it, "Transport of talc via peritoneal stroma
2 3 4 5 6 7 8 9 10 11 12 13 14 15	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that MR. SMITH: Sure. MR. FROST: and we object	2 3 4 5 6 7 8 9 10 11 12 13 14 15	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it, "Transport of talc via peritoneal stroma and presence of ovaries is documented."  Are you aware of studies that document that fact?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that MR. SMITH: Sure. MR. FROST: and we object to you asking any questions about	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it,  "Transport of talc via peritoneal stroma and presence of ovaries is documented."  Are you aware of studies
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that MR. SMITH: Sure. MR. FROST: and we object to you asking any questions about documents without putting it in	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it, "Transport of talc via peritoneal stroma and presence of ovaries is documented."  Are you aware of studies that document that fact?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.)  MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that MR. SMITH: Sure. MR. FROST: and we object to you asking any questions about documents without putting it in front of her.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it, "Transport of talc via peritoneal stroma and presence of ovaries is documented."  Are you aware of studies that document that fact?  MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.)  MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that  MR. SMITH: Sure.  MR. FROST: and we object to you asking any questions about documents without putting it in front of her.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it, "Transport of talc via peritoneal stroma and presence of ovaries is documented."  Are you aware of studies that document that fact?  MR. FROST: Objection.  THE WITNESS: There are
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.) MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that MR. SMITH: Sure. MR. FROST: and we object to you asking any questions about documents without putting it in front of her. BY MR. SMITH: Q. Okay. This is titled,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it, "Transport of talc via peritoneal stroma and presence of ovaries is documented."  Are you aware of studies that document that fact?  MR. FROST: Objection.  THE WITNESS: There are studies documenting talc in
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.)  MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that MR. SMITH: Sure. MR. FROST: and we object to you asking any questions about documents without putting it in front of her.  BY MR. SMITH: Q. Okay. This is titled, "Biological plausibility, migration and	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it,  "Transport of talc via peritoneal stroma and presence of ovaries is documented."  Are you aware of studies that document that fact?  MR. FROST: Objection.  THE WITNESS: There are studies documenting talc in ovaries. But not transported talc
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	And MR. SMITH: Here. I'm going to attach this as Exhibit 31. Am I right? 31.  (Document marked for identification as Exhibit Mossman-31.)  MR. FROST: Yeah, sounds right. I'm just going to before you start, same set of actions as last time. We object to using a summary document that  MR. SMITH: Sure.  MR. FROST: and we object to you asking any questions about documents without putting it in front of her.  BY MR. SMITH: Q. Okay. This is titled, "Biological plausibility, migration and translocation," and what I've done here	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	tissue causing irritation and inflammation."  Would you agree or disagree with that quote from Taher?  MR. FROST: Objection.  THE WITNESS: I would disagree. This has not been shown in certainly not in his studies, which are epidemiological. But in terms of other studies as well.  BY MR. SMITH:  Q. And also in Taher below it, "Transport of talc via peritoneal stroma and presence of ovaries is documented."  Are you aware of studies that document that fact?  MR. FROST: Objection.  THE WITNESS: There are studies documenting talc in ovaries. But not transported talc via peritoneal stroma.

80 (Pages 314 to 317)

	Page 318		Page 320
1	of the reference materials that you	1	BY MR. SMITH:
2	relied upon for your opinions in this	2	Q. So you don't can't answer
3	case?	3	my question?
4	A. I did look at Schildkraut.	4	A. I can't remember. I'd have
5	I don't know whether I listed it or not,	5	to go back and look and see whether
6	but I recall the study. It's an	6	what were the results in terms of certain
7	epidemiological study of African-American	7	subtypes of tumors.
8	populations.	8	Q. Well, you had told me
9	Q. Yeah, it's not listed in	9	earlier that the cohorts which you mainly
10	your key references or reliance	10	relied on supported your position that
11	materials.	11	talc does not statistically significantly
12	A. Oh.	12	increase the risk of ovarian cancer. And
13	Q. But you said you read it?	13	you can't tell me that one of the if
14	A. I I have looked at it in	14	one of the cohort studies that you're
15	the past, yes.	15	relying on heavily for that for that
16	Q. And says, quote from that	16	statement, that it showed that a
17	article, "As most high grade serous	17	statistical significant increased risk of
18	epithelial ovarian cancer but not	18	a particular type of histology of ovarian
19	nonserous subtypes arise in the fallopian	19	cancer?
20	tube. It is possible that direct	20	MR. FROST: Objection.
21	exposure through genital talc	21	THE WITNESS: If I recall
22	specifically affects this disease	22	the Nurses' Health Study, the
23	subtype."	23	original publication emphasized
24	That we had talked earlier	24	more or a that there were more
	Page 319		Page 321
1	about high grade serous epithelial	1	of the serous high grade tumors
2	ovarian cancer thought to arise in the	2	observed. But that was not of
3	fallopian tube; is that correct?	3	statistical significance.
4	MR. FROST: Objection.	4	And in the later study, that
5	THE WITNESS: That's true.	5	did not appear to be the case.
6	But that statement doesn't, in his	6	And I believe it was Gertig versus
7	report, doesn't support the	7	Gates. But I'd have to go back
8	premise of direct exposure through	8	and look at the studies
9	the genital tract. And it's	9	specifically.
10	unclear to me how this would	10	BY MR. SMITH:
11	affect specifically one disease	11	Q. Same from and also
12	subtype.	12	Schildkraut. Did you realize that
13 14	BY MR. SMITH:	13 14	Dr. Schildkraut is a female?  A. No.
14 15	Q. Well, in the first Nurses'	15	
16	Health Study, what was was there a subtype of histological type of	16	Q. Okay. "Therefore, lung inhalation
17	epithelial ovarian cancer that showed a	17	of powder could be a biologically
18	statistical significant increased risk	18	plausible mechanism for the association
19	from the genital use of talc?	19	between nongenital body powder use and
20	MR. FROST: Objection to	20	the increased risk" "increased
21	form.	21	epithelial ovarian cancer risk,
22	THE WITNESS: I'd have to go	22	particularly nonserous epithelial ovarian
23	back and look at that study	23	cancers."
24	specifically.	24	Do you agree with that
44	specifically.		Do you agree with that

81 (Pages 318 to 321)

t statement from Schildkraut?  MR, FROST: Objection.  THE WITNESS: Oh. I don't.  They did find an increase in nongenital body powder use, but not genital body powder use in that study.  And other studies have not supported the nongenital route as being important in in ovarian cancer risk.  BY MR, SMITH:  Q, Well, let me ask you about that. Let me attach which is the next numbered exhibit, Number 32.  (Document marked for identification as Exhibit 17 identification as Exhibit 18 Mossman-32)  BY MR, SMITH:  Q, I do have those stapled. This is entitled, This is conclusion, on Page 6 of 8. This has to do with inhalation and pathways for oboviously absebts fibers at talks about.  Brage 323  If's a 2008 paper, January 2008? A, Yes. Q, And if you flip to the dowith inhalation and pathways for oboviously absebts fibers at it alks about.  Brage 325  If we discuss the transvaginal rower and aptive immunity has not be abstract at the very beginning. Im sorry.  Immorry.  In the - excuse me. Let's go to the abstract at the very beginning. Im sorry.  In we discuss the translocation of inhaled absetsots fibers are transvaginal rower.  They discuss the translocation of inhaled absetsot fibers are transvaginal rower. In the statement from Schildkraut?  MR, FROST: Objection to form.  Subjects exposed to asbestos."  A. Oh, okay.  A. Oh, okay.  A. Oh, okay.  A. Yes.  Do you see that?  A. Yes.  So, So let's get back to our outline that we were going through with Schildkraut.  It says, "It has been proposed that chronic inflammation or through transvaginal route may expert a suppressive effect on adaptive immunity as proposed. The proposed that statement from Schildkraut?  MR, FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal routeI'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR, SMITH:  Q. Next p		Page 322		Page 324
THE WITNESS: Ohjection. They did find an increase in nongenital body power powder use in that study.  A Let's see. Is it this also in the abstract? Q. No, it's in the conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers a sinch that study. A Conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers a sinch that study. A Conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers a sinch that study also in the abstract? Q. No, it's in the conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers a sinch the abstract? Q. No, it's in the conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers a sinch the abstract? A. Let's see. Is it this also in the abstract? Q. No, it's in the conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers a sinch the abstract? Q. No, it's in the conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers a sinch the abstract? Q. No, it's in the conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers as sinch the abstract? Q. No, it's in the conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers as sinch the abstract? Q. No, it's in the conclusion on Page 6 of 8. A Oh, okay. Q. It says, "Asbestos fibers as sinch the abstract? Q. No, it's in the conclusion on Page 6 of 8. A. Oh, okay. Q. It says, "Asbestos fibers as sinch the abstract? Q. No, it's in the conclusion on Page 6 of 8. A. Oh, okay. Q. It says, "Asbestos fibers as sinch the abstract? Q. No, it's in the conclusion on Page 6 of 8. A. Oh, okay. Q. It says, "Asbestos fibers as sinch the abstract? A. Ves. Q. So let's get back to our out the through inhalation or through transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer." Do you agree or disagree  With that statement from Schildkraut?  MR. FROST: Objection to inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  MR. FROST: Objection to inflammation in th	1		1	
They did find an increase in nongenital body power - powder use, but not genital body power - powder use in that study.  And other studies have not supported the nongenital route as possible of supported the nongenital route as possible or graph and the supported the nongenital route as possible or graph and the supported the nongenital route as possible or graph and the supported the nongenital route as possible or graph and the supported the nongenital route as possible or graph and the supported the nongenital route as possible or graph and the supported with supported with supported with sit, Number 32.  BY MR. SMITH:  Chocument marked for identification as Exhibit numbered exhibit, Number 32.  Mossman-32.)  BY MR. SMITH:  Chocument marked for identification as Exhibit numbered exhibit, Number 32.  Mossman-32.)  BY MR. SMITH:  Chocument marked for identification as Exhibit numbered exhibit, Number 32.  Mossman-32.)  BY MR. SMITH:  Do you see that, Doctor?  Page 323  It's a 2008 paper, January 2008?  A. Yes.  Chocument marked for identification as Exhibit number and pathways for inhaled asbestos fibers as it it taks about.  Page 323  It's a 2008 paper, January 2008?  A. Yes.  Chocument marked for identification as Exhibit number as possible as a still of the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it taks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is mean			1	
They did find an increase in nongenital body power — powder use, but not genital body powder use, but not genital body powder use in that study.  And other studies have not supported the nongenital route as being important in — in ovarian cancer risk.  Do you see that?  Q. Well, let me ask you about that. Let me attach which is the next numbered exhibit, Number 32.  (Document marked for identification as Exhibit Mossman-32.)  BYMR. SMITH:  Mossman-32.)  BYMR. SMITH:  Q. If says, "Asbestos fibers are found basically in all organs in subjects exposed to asbestos."  Do you see that?  A. Yes.  Q. So let's get back to our outline that we were going through with Schildkraut.  It says, "It has been proposed that chronic inflammation resulting from exposure to body powder, whether through inhalation or through transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer."  Page 323  If's a 2008 paper, January 2008?  A. Yes.  Q. And if you flip to the conclusion, on Page 6 of 8.  A. Oh, okay.  A. Yes.  Q. So let's get back to our outline that we were going through with Schildkraut.  It says, "It has been proposed that chronic inflammation resulting from exposure to body powder, whether through inhalation or through transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer."  Do you agree or disagree  Page 323  If's a 2008 paper, January 2008?  A. Yes.  Q. And if you flip to the solution, on Page 6 of 8.  THE WITNESS: I don't believe that a transvaginal route — I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BYMR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct tran			1	
5 nongenital body powder use, but not genital body powder use in that study. 6 use in that study. 7 A. Oh, okay. 8 And other studies have not supported the nongenital route as being important in — in ovarian cancer risk. 10 being important in — in ovarian cancer risk. 11 cancer risk. 12 BY MR. SMITH: 13 Q. Well, let me ask you about that. Let me attach which is the next that that. Let me attach which is the next that that. Let me attach which is the next that that. Let me attach which is the next that that. Let me attach which is the next that that. Let me attach which is the next that that that the meast you about that that the meast you about that that. Let me attach which is the next that that the meast you about that that. Let me attach which is the next that that the meast you about that that. Let me attach which is the next that that the meast you about that that. Let me attach which is the next that that that the translation or through above in meast by that.  1 It's a 2008 paper, January 2008?  2 A. Yes.  3 Q. And if you flip to the conclusion on Page 6 of 8. New January 2008?  4 Conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it—it that stake that that that the translation or through tran			1	
se in that study.  And other studies have not supported the nongenital route as being important in in ovarian cancer risk.  BY MR. SMITH:  Q. Well, let me ask you about that. Let me attach which is the next numbered exhibit, Number 32.  (Document marked for identification as Exhibit Mossman-32.)  BY MR. SMITH:  Q. J. It says, "Is has been outline that we were going through with Schildkraut.  It says, "It has been proposed that chronic inflammation resulting from exposure to body powder, whether through inhalation or through transvaginal route may expert a suppressive effect on adaptive immunity believe that a transvaginal route may caper a suppressive effect on adaptive immunity believe that a transvaginal route may expert a suppressive effect on adaptive immunity believe that a transvaginal route may expert a suppressive effect on adaptive immunity believe that a transvaginal route may expert a suppressive effect on adaptive immunity believe that a transvaginal route may expert a suppressive effect on adaptive immunity believe that a transvaginal route may expert a suppressive effect on adaptive immunity believe that a transvaginal route may expert a suppressive effect on adaptive immunity believe that a transvaginal route may expert a suppressive effect on adaptive immunity believe that a transvaginal route may expert a suppressive effect on adaptive immunity has believe that a transvaginal route may expert a suppressive effect on adaptive immunity has believe that a transvaginal route may expert a suppressive effect on adaptive immunity has believe that a transvaginal route may expert a suppressive effect on adaptive immunity has believe that a transvaginal route may expert a suppressive effect on adaptive immunity has believe that a transvaginal route may expert a suppressive effect on adaptive immunity has believe that a transvaginal route may expert a suppressive effect on adaptive immunity has believe that a transvaginal route may expert a suppressive effect on adaptive immunity has believe that a tra			1	
Second State   Seco			1	
8 And other studies have not supported the nongenital route as being important in in ovarian cancer risk. 10 By MR. SMITH: 11 Q. Well, let me ask you about that. Let me attach which is the next numbered exhibit, Number 32. 12 (Document marked for identification as Exhibit Mossman-32.) 13 Mossman-32.) 14 Mossman-32.) 15 My MR. SMITH: 19 BY MR. SMITH: 19 BY MR. SMITH: 19 BY MR. SMITH: 10 (Document marked for identification as Exhibit Mossman-32.) 19 BY MR. SMITH: 10 (Document marked for identification as Exhibit Mossman-32.) 10 BY MR. SMITH: 11 (Document marked for identification as Exhibit Mossman-32.) 11 BY MR. SMITH: 12 (Document marked for identification as Exhibit Mossman-32.) 12 BY MR. SMITH: 13 (Document marked for identification as Exhibit Mossman-32.) 14 (Document marked for identification as Exhibit Mossman-32.) 15 BY MR. SMITH: 19 (Document marked for identification as Exhibit Mossman-32.) 20 (J. Ido have those stapled. 21 (Document marked for identification as Exhibit Mossman-32.) 21 (Document marked for identification as Exhibit Mossman-32.) 22 (Translocation pathways for inhaled asbestos fibers." 23 (D. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about. 24 (Document marked for identification as Exhibit Mossman-32.) 25 (Document marked for identification as Exhibit Mossman-32.) 26 (Document marked for identification as Exhibit Mossman-32.) 27 (Document marked for identification as Exhibit Mossman-32.) 28 (Page 323) 29 (Page 323) 20 (Page 323) 21 (Page 323) 22 (Page 323) 23 (Page 323) 24 (Page 323) 25 (Page 323) 26 (Page 323) 27 (Page 323) 28 (Page 323) 29 (Page 323) 20 (Page 323) 21 (Page 323) 22 (Page 323) 23 (Page 323) 24 (Page 323) 25 (Page 323) 26 (Page 323) 27 (Page 323) 28 (Page 323) 29 (Page 323) 20 (Page 323) 20 (Page 323) 21 (Page 323) 22 (Page 323) 23 (Page 323) 24 (Page 323) 24 (Page 323) 25 (Page 323) 26 (Page 323) 27 (Page 323) 28 (Page 323) 29 (Page 323) 20 (Page 323) 20 (Page 323) 21 (				•
supported the nongenital route as being important in in ovarian cancer risk.  10 being important in in ovarian cancer risk.  11 Cancer risk.  12 BY MR. SMITH:  13 Q. Well, let me ask you about 14 that. Let me attach which is the next 15 numbered exhibit, Number 32.  14 that. Let me attach which is the next 16 indentification as Exhibit 17 proposed that chronic inflammation resulting from exposure to body powder, whether through inhalation or through transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer."  18 Do you see that, Doctor?  19 BY MR. SMITH:  19 Whether through inhalation or through transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer."  20 Q. And if you flip to the 24 conclusion, on Page 6 of 8. This has to 35 do with inhalation and pathways for 55 do with inhalation and pathways for 56 do with inhalation and pathways for 57 talks about. 77 talks about. 78 By MR. FROST: Objection to 79 poyou agree or disagree 79 path 60 or 79 path 79				• •
being important in — in ovarian cancer risk.    11				
11 cancer risk. 12 BY MR. SMITH: 13 Q. Well, let me ask you about 14 that. Let me attach which is the next 15 numbered exhibit, Number 32. 16 (Document marked for 17 identification as Exhibit 18 Mossman-32.) 19 BY MR. SMITH: 19 Q. I do have those stapled. 20 This is entitled, 21 This is entitled, 22 "Translocation pathways for inhaled asbestos fibers." 24 Do you see that, Doctor? 25 A. Yes. 26 Q. And if you flip to the 27 do with inhalation and pathways for 28 do with inhalation and pathways for 29 obviously asbestos fibers as it—it 20 at laks about. 21 The well discuss the 22 translocation of inhaled asbestos fibers 23 abased on pulmonary and pleuropulmonary 24 interstitial fluid dynamics. Fibers can 25 pags the alveolar barrier and reach the 26 lung interstitium via the paracellular 27 route down a mass water flow due to 28 page 6 of 8, it says, "Asbestos fibers 29 Do you see that? 20 Do you see that? 21 A. Yes. 22 A. Yes. 23 Do you see that 24 translocation of inhaled asbeston fibers 25 Do you see that? 26 Do you see that? 27 Do you see that? 28 Page 323 29 Do you see that? 30 Q. And then in conclusion on 31 Page 6 of 8, This has to 42 Conclusion, on Page 6 of 8 and pleuropulmonary 32 Do you see that? 33 Do you see that? 44 interstitial fluid dynamics. Fibers can 45 page 6 of 8, trays, "Asbestos fibers 46 combined osmotic an hydraulic pressure 47 page 6 of 8, it says, "Asbestos fibers 48 page of of 8, it says, "Asbestos fibers 49 po you see that? 40 Do you see that? 41 po you agree or disagree 42 with that statement? 43 with that statement from Schildkraut? 44 believe that a transvaginal route—I'm not sure what is meant by that. 45 But certainly, whether 46 inflammation exerts a suppressive effect on adaptive immunity and powder use was associated with ovarian cancer. 46 But Chronic inflammation in the ovary due to particles that travel through a direct transvaginal route. 47 Transvaginal route may expert a suppressive effect on adaptive immunity and powder. 48 With that statement? 49 page 6 of 8, it says, "				
12 BY MR. SMITH: 13 Q. Well, let me ask you about 14 that. Let me attach which is the next 15 numbered exhibit, Number 32. 16 (Document marked for 17 identification as Exhibit 18 Mossman-32.) 19 BY MR. SMITH: 19 BY MR. SMITH: 20 Q. I do have those stapled. 21 This is entitled, 22 "Translocation pathways for inhaled 23 asbestos fibers." 24 Do you see that, Doctor? 25 A. Yes. 26 Q. And if you flip to the 27 conclusion, on Page 6 of 8. This has to 28 do with inhalation and pathways for 29 do biously asbestos fibers as it it 20 I m sory. 21 translocation of inhaled asbestos fibers 22 ass the alveolar barrier and reach the 23 page 6 of 8, it says, "Asbestos fibers 24 The outper of inhaled aspective in the combined osmotic an hydraulic pressure 29 page 6 of 8, it says, "Asbestos fibers 20 Do you see that? 21 Countent marked for 21 It's a 2008 paper, January 2008? 22 A. Yes. 23 Q. And then in conclusion on 24 Page 6 of 8, it says, "Asbestos fibers 25 Do you see that? 26 Do you see that chronic inflammation 26 resulting from exposure to body powder, whether through inhalation or through transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer." 27 Do you agree or disagree 28 Do you agree or disagree 29 With that statement from Schildkraut? 29 MR. FROST: Objection to form. 20 Next paragraph. "The results of this study show that genital powder use was associated with lovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route." 20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 22 With that statement? 23 Do you agree or disagree with that statement? 24 With that statement from Schildkraut? 25 MR. FROST: Objection to outline that were going through with and tach were going through with cutter late where going through with and tach result in flammation in the ovary due to particles that travel through a direct transvagin				
Q. So let's get back to our outline that we were going through with Schildkraut.  (Document marked for identification as Exhibit Mossman-32.)  BY MR. SMITH:  Q. I do have those stapled.  This is entitled, This is entitled, 21 asbestos fibers."  24 Do you see that, Doctor?  Page 323  It's a 2008 paper, January 2008? A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it — it talks about.  I translocation of inhaled asbestos fibers as ased on pulmonary and pleuropulmonary in transtocation of inhaled asbestos fibers as saked on pulmonary and pleuropulmonary in terstitial fluid dynamics. Fibers can page 6 of 8. This has the combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes. Q. And then in conclusion on Page 6 of 8. thas, "Asbestos fibers as it — it combined osmotic an hydraulic pressure gradient."  Do you see that? Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers as Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers as Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers as A. Yes. Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers as Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers as MR. FROST: Objection to outline that we were going through with Schildkraut. It says, "It has been proposed that chronic inflammation or through transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer."  With that statement from Schildkraut?  MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route as suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer."  MR. FROST: Objection to outline that we were going through whether insuling from exposure to body powder, whether through inflammation or through transvaginal route."  It says, "It has been proposed that chronic inflammation or through transvagin				
that. Let me attach which is the next numbered exhibit, Number 32.  (Document marked for identification as Exhibit Mossman-32.)  BY MR. SMITH:  Q. I do have those stapled.  This is entitled,  "Translocation pathways for inhaled asbestos fibers."  Do you see that, Doctor?  Page 323  If's a 2008 paper, January 2008?  A. Yes.  Q. And if you flip to the dowin inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  We discuss the translocation of inhaled asbestos fibers as translocation of inhaled asbestos fibers are combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.  O. And then in conclusion on 22  Page 6 of 8, it says, "It has been proposed that chronic inflammation or through that transvaginal route inflammation or through that transvaginal route inflammation or through a direct transvaginal route."  With that statement from Schildkraut?  With that statement from Schi				
15 numbered exhibit, Number 32. 16 (Document marked for identification as Exhibit Mossman-32.) 18 Mossman-32.) 19 BY MR. SMITH: 20 Q. I do have those stapled. 21 This is entitled, 22 "Translocation pathways for inhaled asbestos fibers." 24 Do you see that, Doctor? 25 A. Yes. 26 Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for talks about. 27 Italks about. 28 In the excuse me. Let's go to the abstract at the very beginning. 29 I'm sorry. 20 I'm sorry. 21 Translocation pathways for the conclusion of inhaled asbestos fibers are interstitial fluid dynamics. Fibers can lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient." 20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 22 Page 6 of 8, it says, "Asbestos fibers as it it and are consistent with localized chronic inflammation resulting from exposure to body powder, whether through inhalation or through transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer." 25 Page 323 Page 325  26 With that statement from Schildkraut? 27 MR. FROST: Objection to form. 28 With that statement from Schildkraut? 29 With that statement from Schildkraut? 20 MR. FROST: Objection to form. 20 MR. FROST: Objection to form. 21 THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that. 28 But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer. 29 Page 325  20 Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 22 With that statement? 23 MR. FROST: Objection to				` •
Comparison of the combined own in o				
identification as Exhibit Mossman-32.)  BY MR. SMITH:  Q. I do have those stapled.  This is entitled, Translocation pathways for inhaled asbestos fibers."  Do you see that, Doctor?  Page 323  It's a 2008 paper, January 2008? A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it — it talks about.  In the — excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  I'm conclusion of inhaled asbestos fibers as the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you agree or disagree  With that statement from Schildkraut?  MR. FROST: Objection to form.  With that statement from Schildkraut?  MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route – I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH: Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree  With that statement from Schildkraut?  MR. FROST: Objection to				
18 Mossman-32.) 19 BY MR. SMITH: 20 Q. I do have those stapled. 21 This is entitled, 22 "Translocation pathways for inhaled asbestos fibers." 24 Do you see that, Doctor? 25 Do you see that, Doctor? 26 A. Yes. 27 A. Yes. 28 C. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it—it talks about. 29 Go to the abstract at the very beginning. 20 In the — excuse me. Let's go to the abstract at the very beginning. 29 In the — excuse me. Let's go to the abstract at the very beginning. 20 In the — excuse me. Let's go to the abstract at the very beginning. 21 In the — excuse me. Let's go to the abstract at the very beginning. 21 In the — excuse me. Let's go to the abstract at the very beginning. 20 In the most of inhaled asbestos fibers as it—it translocation of inhaled asbestos fibers are first interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient." 21 A. Yes. 22 Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers 23 Page 6 of 8, it says, "Asbestos fibers 24 Page 323  Page 325  25 With that statement from Schildkraut? 26 MR. FROST: Objection to form. 27 MR. FROST: Objection to bed body a daptive immunity and pleuropulmonary and pleuropulmonary interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient." 28 Do you see that? 29 Do you agree or disagree whether through a direct transvaginal route." 29 Do you agree or disagree with that statement? 20 Do you agree or disagree with that statement from Schildkraut? 21 Do you agree or disagree with that statement from Schildkraut? 22 La. Yes. 23 Do you agree or disagree with that statement in through a direct transvaginal route." 29 Do you agree or disagree with that statement? 20 MR. FROST: Objection to				• .
BY MR. SMITH:  Q. I do have those stapled. This is entitled, Translocation pathways for inhaled asbestos fibers."  Page 323  I It's a 2008 paper, January 2008? A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for do with inhalation and pathways for do bviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  "We discuss the translocation of inhaled asbestos fibers as the alveolar barrier and reach the lung interstitian fluid dynamics. Fibers can to the abstract and reach the lung interstitium via the paracellular route down a mass water flow due to gradient."  Day ou agree or disagree  Page 325  with that statement from Schildkraut? A. Yes.  MR. FROST: Objection to form. THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that. But certainly, whether inflammation exerts a suppressive effect on adaptive immunity and the very beginning.  Page 325  with that statement from Schildkraut? This is about. This is is entitled, as uppressive effect on adaptive immunity and the statement from Schildkraut?  We discuss the In the excuse me. Let's But certainly, whether inflammation exerts a suppressive effect on adaptive immunity Amount of the with that statement from Schildkraut?  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity Amount of the with the statement from Schildkraut?  Read of the with that statement from Schildkraut?  Read of the statement from Schildkraut?  Read of		identification as Exhibit	1	
Q. I do have those stapled. This is entitled, This is entitled, This is entitled, This is entitled, Translocation pathways for inhaled asbestos fibers."  Do you see that, Doctor?  Page 323  I It's a 2008 paper, January 2008? A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for bolivously asbestos fibers as it it talks about. In the excuse me. Let's go to the abstract at the very beginning. T'm sorry.  We discuss the transvaginal route may expert a suppressive effect on adaptive immunity leading to increased risk of epithelial ovarian cancer." Do you agree or disagree  Page 325  With that statement from Schildkraut? MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that. But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  We discuss the translocation of inhaled absetsos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.  Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  MR. FROST: Objection to	18		1	
This is entitled,  "Translocation pathways for inhaled asbestos fibers."  Do you see that, Doctor?  Page 323  It's a 2008 paper, January 2008?  A. Yes.  Oand if you flip to the dowith inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  "We discuss the translocation of inhaled asbestos fibers as table absence on pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  This is entitled,  "Translocation pathways for inhaled asbestos fibers."  Page 323  Page 325  With that statement from Schildkraut?  MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you see that?  A. Yes.  Q. And then in conclusion on  Page 6 of 8, it says, "Asbestos fibers  MR. FROST: Objection to	19		1	whether through inhalation or through
22 "Translocation pathways for inhaled asbestos fibers." 24 Do you see that, Doctor?  Page 323  1 It's a 2008 paper, January 2008? 2 A. Yes. 3 Q. And if you flip to the 4 conclusion, on Page 6 of 8. This has to 4 do with inhalation and pathways for 5 do with inhalation and pathways for 6 obviously asbestos fibers as it it 7 talks about.  8 In the excuse me. Let's 9 go to the abstract at the very beginning. 10 I'm sorry. 11 "We discuss the 12 translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary 14 interstitial fluid dynamics. Fibers can 15 pass the alveolar barrier and reach the 16 lung interstitium via the paracellular 7 route down a mass water flow due to 20 Do you see that? 22 Q. And then in conclusion on 22 Page 6 of 8, it says, "Asbestos fibers 23 Page 6 of 8, it says, "Asbestos fibers 24 MR. FROST: Objection to 22 with that statement from Schildkraut? 22 bo you agree or disagree 23 worian cancer." 23 beading to increased risk of epithelial ovarian cancer." 24 Do you agree or disagree 24 bo you agree or disagree 25 with that statement from Schildkraut? 26 MR. FROST: Objection to 27 mich at the statement from Schildkraut? 27 MR. FROST: Objection to 29 with that statement from Schildkraut? 28 With that statement from Schildkraut? 29 MR. FROST: Objection to 29 mich and cancer. Im not sure what is meant by that. 29 Bage 325 29 With that statement from Schildkraut? 20 Do you agree or disagree 20 mich and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route." 20 Do you agree or disagree 20 with that statement? 20 MR. FROST: Objection to	20	Q. I do have those stapled.	20	transvaginal route may expert a
23 asbestos fibers." 24 Do you see that, Doctor? 24 Do you agree or disagree  Page 323  1 It's a 2008 paper, January 2008? 2 A. Yes. 3 Q. And if you flip to the 4 conclusion, on Page 6 of 8. This has to 5 do with inhalation and pathways for 6 obviously asbestos fibers as it it 7 talks about. 8 In the excuse me. Let's 9 go to the abstract at the very beginning. 10 I'm sorry. 11 "We discuss the 12 translocation of inhaled asbestos fibers 13 based on pulmonary and pleuropulmonary 14 interstitial fluid dynamics. Fibers can 15 pass the alveolar barrier and reach the 16 lung interstitium via the paracellular 17 route down a mass water flow due to 18 combined osmotic an hydraulic pressure 19 gradient." 20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 23 Page 6 of 8, it says, "Asbestos fibers 20 Day ou see of disagree  page 325  Page 325  With that statement from Schildkraut?  MR. FROST: Objection to  provide that a transaction of indent at transvaginal route I'm not sure what is route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	21	This is entitled,	21	suppressive effect on adaptive immunity
23 asbestos fibers." 24 Do you see that, Doctor? 24 Do you agree or disagree  Page 323  1 It's a 2008 paper, January 2008? 2 A. Yes. 3 Q. And if you flip to the 4 conclusion, on Page 6 of 8. This has to 5 do with inhalation and pathways for 6 obviously asbestos fibers as it it 7 talks about. 8 In the excuse me. Let's 9 go to the abstract at the very beginning. 10 I'm sorry. 11 "We discuss the 11 pass the alveolar barrier and reach the 12 translocation of inhaled asbestos fibers 13 based on pulmonary and pleuropulmonary 14 interstitial fluid dynamics. Fibers can 15 pass the alveolar barrier and reach the 16 lung interstitium via the paracellular 17 route down a mass water flow due to 18 combined osmotic an hydraulic pressure 19 gradient." 20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 23 Page 6 of 8, it says, "Asbestos fibers 20 Day ou see that? 21 Do you agree or disagree  Page 325  Page 325  With that statement from Schildkraut? MR. FROST: Objection to  Page 325  With that statement from Schildkraut? MR. FROST: Objection to	22	"Translocation pathways for inhaled	22	leading to increased risk of epithelial
Page 323  It's a 2008 paper, January 2008?  A. Yes.  Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it fin the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the "We discuss the tirnsolocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient." Do you see that?  A. Yes. Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  1 with that statement from Schildkraut?  MRI FROST: Objection to form. THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that. But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer. BY MR. SMITH: Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH: Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	23		23	
It's a 2008 paper, January 2008?  A. Yes.  Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can lung interstitium via the paracellular route down a mass water flow due to gradient."  Do you see that?  Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  1 with that statement from Schildkraut?  MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH: Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	24	Do you see that, Doctor?	24	Do you agree or disagree
It's a 2008 paper, January 2008?  A. Yes.  Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can lung interstitium via the paracellular route down a mass water flow due to gradient."  Do you see that?  Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  1 with that statement from Schildkraut?  MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that. But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer. BY MR. SMITH: Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route." Do you agree or disagree with that statement?  MR. FROST: Objection to				
A. Yes.  Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for talks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  "We discuss the "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can lung interstitium via the paracellular combined osmotic an hydraulic pressure gradient."  A. Yes.  Q. And then in conclusion on Page 6 of 8. This has to form.  A. Yes.  MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH: Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to		Page 323		Page 325
Q. And if you flip to the  conclusion, on Page 6 of 8. This has to  do with inhalation and pathways for  talks about.  In the excuse me. Let's  go to the abstract at the very beginning.  "We discuss the  translocation of inhaled asbestos fibers  based on pulmonary and pleuropulmonary  interstitial fluid dynamics. Fibers can  lung interstitium via the paracellular  route down a mass water flow due to  gradient."  Q. And then in conclusion on  Page 6 of 8, This has to  4 THE WITNESS: I don't  believe that a transvaginal  route I'm not sure what is  meant by that.  But certainly, whether  inflammation exerts a suppressive effect on adaptive immunity has  not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	1			
do with inhalation and pathways for do with inhalation and sure at ransvaginal route. It is believe that a transvaginal route - I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  By MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  A. Yes.  Q. And then in conclusion on 22 with that statement?  Page 6 of 8, it says, "Asbestos fibers 23 MR. FROST: Objection to		It's a 2008 paper, January 2008?	1	with that statement from Schildkraut?
do with inhalation and pathways for obviously asbestos fibers as it it falks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  We discuss the frameword interstitial fluid dynamics. Fibers can lung interstitium via the paracellular route down a mass water flow due to gradient."  Do you see that?  A. Yes.  Do you see 6 of 8, it says, "Asbestos fibers an talks about.  Believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether increase whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to			1	
obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can lung interstitium via the paracellular route down a mass water flow due to gradient."  Do you see that?  A. Yes.  Owner imant by that. But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer. BY MR. SMITH: Owner inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer. BY MR. SMITH:  Owner use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  A. Yes.  Owner use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  Page 6 of 8, it says, "Asbestos fibers  A. Res.  A. Yes.  Owner use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	2	A. Yes.	2	MR. FROST: Objection to
talks about.  In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can lung interstitium via the paracellular route down a mass water flow due to gradient." Do you see that?  A. Yes.  In the excuse me. Let's But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer. By MR. SMITH: A. Yes.  C. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  Page 6 of 8, it says, "Asbestos fibers  In meant by that. But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  By MR. SMITH:  C. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	2	<ul><li>A. Yes.</li><li>Q. And if you flip to the</li></ul>	2 3	MR. FROST: Objection to form.
In the excuse me. Let's go to the abstract at the very beginning.  I'm sorry.  I'm sorry.  I'we discuss the Translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can bases the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to gradient."  Do you see that?  A. Yes.  Page 6 of 8, it says, "Asbestos fibers  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer. BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	2 3 4	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to	2 3 4	MR. FROST: Objection to form.  THE WITNESS: I don't
8 In the excuse me. Let's 9 go to the abstract at the very beginning. 10 I'm sorry. 11 effect on adaptive immunity has 12 translocation of inhaled asbestos fibers 13 based on pulmonary and pleuropulmonary 14 interstitial fluid dynamics. Fibers can 15 pass the alveolar barrier and reach the 16 lung interstitium via the paracellular 17 route down a mass water flow due to 18 combined osmotic an hydraulic pressure 19 gradient." 20 Do you see that? 21 Do you agree or disagree 22 Q. And then in conclusion on 23 Page 6 of 8, it says, "Asbestos fibers 21 Do you agree or disagree 23 Page 6 of 8, it says, "Asbestos fibers 20 Inflammation exerts a suppressive 24 Inflammation exerts a suppressive 25 Inflammation exerts a suppressive 26 Inflammation exerts a suppressive 27 Inflammation exerts a suppressive 28 Inflammation exerts a suppressive 29 Inflammation exerts a suppressive 20 Inflammation exerts a suppressive 20 Inflammation exerts a suppressive 21 Inflammation exerts a suppressive 22 Inflammation exerts a suppressive 23 Inflammation exerts a suppressive 24 Inflammation exerts a suppressive 25 Inflammation exerts a suppressive 26 Inflammation exerts a suppressive 27 Inflammation exerts a suppressive 28 Inflammation exerts a suppressive 29 Inflammation exerts a suppressive 29 Inflammation exerts a suppressive 20 Inflammation exerts a suppressive 21 Inflammation exerts a suppressive 22 Inflammation exerts a suppressive 23 Inflammation exerts a suppressive 24 Inflammation exerts a suppressive 25 Inflammation exerts a suppressive 26 Inflammation exerts a suppressive 27 Inflammation exerts a suppressive 28 Inflammation exerts a suppressive 29 Inflammation exerts a suppressive 20 Inflammation exerts a suppressive 20 Inflammation exerts a suppressive 21 Inflammation e	2 3 4 5	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for	2 3 4 5	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal
9 go to the abstract at the very beginning. 10 I'm sorry. 11 "We discuss the 12 translocation of inhaled asbestos fibers 13 based on pulmonary and pleuropulmonary 14 interstitial fluid dynamics. Fibers can 15 pass the alveolar barrier and reach the 16 lung interstitium via the paracellular 17 route down a mass water flow due to 18 combined osmotic an hydraulic pressure 19 gradient." 20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 23 Page 6 of 8, it says, "Asbestos fibers 20 Inflammation exerts a suppressive effect on adaptive immunity has 10 not been shown in ovarian cancer. 11 not been shown in ovarian cancer. 12 BY MR. SMITH: 13 Q. Next paragraph. "The 14 results of this study show that genital 15 powder use was associated with ovarian 16 cancer risk in African-American women, 17 and are consistent with localized chronic inflammation in the ovary due to 19 particles that travel through a direct transvaginal route." 20 Do you agree or disagree 21 Do you agree or disagree 22 With that statement? 23 MR. FROST: Objection to	2 3 4 5 6	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it	2 3 4 5 6	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is
10 I'm sorry. 11 "We discuss the 12 translocation of inhaled asbestos fibers 13 based on pulmonary and pleuropulmonary 14 interstitial fluid dynamics. Fibers can 15 pass the alveolar barrier and reach the 16 lung interstitium via the paracellular 17 route down a mass water flow due to 18 combined osmotic an hydraulic pressure 19 gradient." 20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 23 Page 6 of 8, it says, "Asbestos fibers 20 Interstition adaptive immunity has 21 not been shown in ovarian and example in paragraph. "The 24 results of this study show that genital powder use was associated with ovarian cancer. 25 pass defect on adaptive immunity has 26 not been shown in ovarian cancer.  26 BY MR. SMITH: 27 and seffect on adaptive immunity has 28 not been shown in ovarian cancer.  28 BY MR. SMITH: 29 paragraph. "The 29 results of this study show that genital powder use was associated with ovarian cancer.  26 cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  29 particles that travel through a direct transvaginal route."  20 Do you agree or disagree 21 MR. FROST: Objection to	2 3 4 5 6 7	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.	2 3 4 5 6 7	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.
11 "We discuss the 12 translocation of inhaled asbestos fibers 13 based on pulmonary and pleuropulmonary 14 interstitial fluid dynamics. Fibers can 15 pass the alveolar barrier and reach the 16 lung interstitium via the paracellular 17 route down a mass water flow due to 18 combined osmotic an hydraulic pressure 19 gradient." 10 po you see that? 20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 23 Page 6 of 8, it says, "Asbestos fibers 20 To you see that? 21 Do you see that? 22 MR. SMITH: 23 BY MR. SMITH: 24 results of this study show that genital 25 powder use was associated with ovarian 26 cancer risk in African-American women, 27 and are consistent with localized chronic 28 inflammation in the ovary due to 29 particles that travel through a direct 20 transvaginal route." 21 Do you agree or disagree 22 with that statement? 23 MR. FROST: Objection to	2 3 4 5 6 7 8	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's	2 3 4 5 6 7 8	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether
translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  Page 6 of 8, it says, "Asbestos fibers  Do you fixed  A. Yes.  Do you agree or disagree with that statement?  MR. FROST: Objection to	2 3 4 5 6 7 8 9	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning.	2 3 4 5 6 7 8 9	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive
based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  A. Yes.  Q. And then in conclusion on page 6 of 8, it says, "Asbestos fibers  Do you agree or disagree with that statement?  MR. FROST: Objection to	2 3 4 5 6 7 8 9	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.	2 3 4 5 6 7 8 9	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has
interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.  Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  14 results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route." Do you agree or disagree with that statement?  MR. FROST: Objection to	2 3 4 5 6 7 8 9 10	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the	2 3 4 5 6 7 8 9 10	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.
pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.  Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers	2 3 4 5 6 7 8 9 10 11 12	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:
lung interstitium via the paracellular route down a mass water flow due to route down a mass water flo	2 3 4 5 6 7 8 9 10 11 12 13	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary	2 3 4 5 6 7 8 9 10 11 12 13	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The
route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.  Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  17 and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12 13	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can	2 3 4 5 6 7 8 9 10 11 12 13 14	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital
combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.  Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  18 inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the	2 3 4 5 6 7 8 9 10 11 12 13 14 15	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian
19 gradient." 20 Do you see that? 21 A. Yes. 22 Q. And then in conclusion on 23 Page 6 of 8, it says, "Asbestos fibers 29 particles that travel through a direct transvaginal route." 20 transvaginal route." 21 Do you agree or disagree with that statement? 22 with that statement? 23 MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women,
20Do you see that?20transvaginal route."21A. Yes.21Do you agree or disagree22Q. And then in conclusion on22with that statement?23Page 6 of 8, it says, "Asbestos fibers23MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic
A. Yes.  Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers  21 Do you agree or disagree with that statement? 23 MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to
Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers 23 With that statement? 23 MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct
Page 6 of 8, it says, "Asbestos fibers 23 MR. FROST: Objection to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."
	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree
2.1 de found oasieany in an organs in 2.7 foliii.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that? A. Yes. Q. And then in conclusion on	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?
	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. Yes. Q. And if you flip to the conclusion, on Page 6 of 8. This has to do with inhalation and pathways for obviously asbestos fibers as it it talks about.  In the excuse me. Let's go to the abstract at the very beginning. I'm sorry.  "We discuss the translocation of inhaled asbestos fibers based on pulmonary and pleuropulmonary interstitial fluid dynamics. Fibers can pass the alveolar barrier and reach the lung interstitium via the paracellular route down a mass water flow due to combined osmotic an hydraulic pressure gradient."  Do you see that?  A. Yes. Q. And then in conclusion on Page 6 of 8, it says, "Asbestos fibers	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	MR. FROST: Objection to form.  THE WITNESS: I don't believe that a transvaginal route I'm not sure what is meant by that.  But certainly, whether inflammation exerts a suppressive effect on adaptive immunity has not been shown in ovarian cancer.  BY MR. SMITH:  Q. Next paragraph. "The results of this study show that genital powder use was associated with ovarian cancer risk in African-American women, and are consistent with localized chronic inflammation in the ovary due to particles that travel through a direct transvaginal route."  Do you agree or disagree with that statement?  MR. FROST: Objection to

82 (Pages 322 to 325)

	Page 326		Page 328
1	THE WITNESS: I disagree.	1	cancer. But not through pathways
2	Dr. Schildkraut did not look at	2	that are linked to translocation
3	the travel of particles to the	3	to the ovaries.
4	ovary through a direct	4	BY MR. SMITH:
5	transvaginal route.	5	Q. What are you basing that
6	BY MR. SMITH:	6	opinion on?
7	Q. And Houghton was one of the	7	A. First of all, if you have a
8	cohorts you said that you relied heavily	8	hysterectomy, you are removing the source
9	on for your opinion that talc does not	9	or the site of tumor development. And
10	statistically increase the risk of	10	you're also affecting hormonal states
11	ovarian cancer, correct?	11	which might be important.
12	A. Yes.	12	So to extrapolate results
13	Q. And this is a quote from	13	from tubal ligation or hysterectomy to
14	Houghton, if you see below that. "Talc	14	pathways where talc migrates to the
15	particulates from perineal application	15	ovaries can't be linked from these
16	have been shown to migrate to the	16	studies.
17	ovaries."	17	Q. You you said that for
18	Do you agree or disagree	18	hysterectomies, but what about tubal
19	with that statement?	19	ligation?
20	MR. FROST: Objection.	20	A. A tubal ligation may do a
21	THE WITNESS: I'd have to	21	lot of things.
22	look at her publication. I know	22	Q. May?
23	she did not look at migration in	23	A. Yes. There's supplemental
24	her studies. So I couldn't agree	24	hormones that maybe have to be given as a
	Page 327		Page 329
1	with that without seeing the	1	result.
2	reference that supports the fact	2	Q. May have to be given or you
3	that talc particulates may migrate		
		3	know this? What where are you getting
4	to the ovaries. I have not seen	4	know this? What where are you getting this from?
4 5	to the ovaries. I have not seen data showing that.	4 5	know this? What where are you getting this from?  MR. FROST: Objection.
4 5 6	to the ovaries. I have not seen data showing that. BY MR. SMITH:	4 5 6	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my
4 5	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that	4 5	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the
4 5 6 7 8	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation	4 5 6 7 8	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and
4 5 6 7 8 9	to the ovaries. I have not seen data showing that. BY MR. SMITH: Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate	4 5 6 7 8 9	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a
4 5 6 7 8 9	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the	4 5 6 7 8 9	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.
4 5 6 7 8 9 10	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced	4 5 6 7 8 9 10	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:
4 5 6 7 8 9 10 11	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."	4 5 6 7 8 9 10 11 12	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The
4 5 6 7 8 9 10	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?	4 5 6 7 8 9 10	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology,
4 5 6 7 8 9 10 11 12 13 14	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."	4 5 6 7 8 9 10 11 12 13 14	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?
4 5 6 7 8 9 10 11 12 13 14 15	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.	4 5 6 7 8 9 10 11 12 13	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of
4 5 6 7 8 9 10 11 12 13 14 15 16	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:	4 5 6 7 8 9 10 11 12 13 14 15 16	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that
4 5 6 7 8 9 10 11 12 13 14 15	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:  Q. It's in the same paragraph.	4 5 6 7 8 9 10 11 12 13 14 15 16 17	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that  Q. I understand.
4 5 6 7 8 9 10 11 12 13 14 15 16 17	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:  Q. It's in the same paragraph.  A. Yes.  Q. Do you agree or disagree	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that  Q. I understand.
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:  Q. It's in the same paragraph.  A. Yes.  Q. Do you agree or disagree with that statement from Houghton?	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that  Q. I understand.  A that's where I got my masters degree in cervical cancer induction.
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:  Q. It's in the same paragraph.  A. Yes.  Q. Do you agree or disagree	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that  Q. I understand.  A that's where I got my masters degree in cervical cancer
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:  Q. It's in the same paragraph.  A. Yes.  Q. Do you agree or disagree with that statement from Houghton?	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that  Q. I understand.  A that's where I got my masters degree in cervical cancer induction.
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:  Q. It's in the same paragraph.  A. Yes.  Q. Do you agree or disagree with that statement from Houghton?  MR. FROST: Objection.	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that  Q. I understand.  A that's where I got my masters degree in cervical cancer induction.  And I worked with a doctor
4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	to the ovaries. I have not seen data showing that.  BY MR. SMITH:  Q. Okay. And to go on in that paragraph. "Furthermore, tubal ligation and/or hysterectomy which would eliminate the pathway of talc particles to the ovaries are associated with a reduced cancer risk."  Do you see that?  MR. FROST: Objection to form.  BY MR. SMITH:  Q. It's in the same paragraph.  A. Yes.  Q. Do you agree or disagree with that statement from Houghton?  MR. FROST: Objection.  THE WITNESS: I agree with	4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	know this? What where are you getting this from?  MR. FROST: Objection.  THE WITNESS: From my experience when I was in the department of obstetrics and gynecology and working with a physician in this regard.  BY MR. SMITH:  Q. Wait, hold on. The department of obstetrics and gynecology, when and where?  A. At the University of Vermont. I mentioned earlier that  Q. I understand.  A that's where I got my masters degree in cervical cancer induction.  And I worked with a doctor who did a variety of procedures including

83 (Pages 326 to 329)

	Page 330		Page 332
1	masters, how long of a program was this	1	that's citing studies of women that have
2	with this doctor?	2	had tubal ligations and looking at that,
3	A. With Dr. Ray, I started as	3	right?
4	an undergraduate working summers. So I	4	The the purpose of the
5	would say a total of maybe five years.	5	purpose of the of the the women
6	Q. So as an undergraduate and	6	getting the tubal ligation wasn't to
7	as a in your masters program, working	7	prevent talc from going to their ovaries,
8	with a doctor who is an OB/GYN and	8	but they are looking at reduced cancer
9	observing him do tubal ligations and	9	risk from women that have that in these
10	A. No. That's not what I'm	10	studies, correct?
11	saying.	11	MR. FROST: Objection.
12	Q. Well, what	12	THE WITNESS: What I you
13	A. What I'm saying is that	13	asked if I agreed with the
14	tubal ligation occurs because of damage	14	statement. And tubal ligation is
15	to an ovary, infection in the pelvic	15	not doesn't eliminate the
16	area, including chronic infection. And	16	pathway of talc particles to the
17	if you remove or tie off the tubes, it's	17	ovaries as a primary function of
18	a way to curb these various diseases.	18	the procedure.
19	Tubal ligations are not done	19	So it's this is an
20	to eliminate pathways of talc migration	20	epidemiological study. We're
21	to the ovaries.	21	talking about plausible pathways
22	Q. I don't think	22	of migration or translocation of
23	A. This makes no sense.	23	particles to the ovaries. And
24		24	what I'm saying here is that
24	Q. I don't think that's what		what I'm saying here is that
	Page 331		Page 333
1	they are saying. What tubal ligation	1	there's no link between tubal
2	can also be used to prevent pregnancy, as	2	ligation, hysterectomy, and
3	a form of birth control, right?	3	pathways of talc particle
4	A. Well, it's pretty severe.	4	migration to the ovaries.
5	Yes.	5	BY MR. SMITH:
6	Q. I have heard a woman saying	6	Q. So you're telling me that if
7	she is going to get her tubes tied after	7	the theory is, and what's been stated in
8	she has her third child. I've heard that	8	all of the stuff that I've read with you
9	routinely, have you not?	9	and attached as Exhibit 31, about
10	A. Yes, but it also affects	10	transmigration from a woman dusting her
11	their hormonal status.	11	perineum with Baby Powder or Shower to
12	What I'm saying is there are	12	Shower, and its ascension up the the
13	many repercussions to tubal ligations and	13	genital tract of a woman, through the
14	they are not done to eliminate the	14	fallopian tubes to the ovaries, that if I
15	pathway of talc particles to the ovaries.	15	then ligate the fallopian tubes,
16	Q. I don't think that's what	16	therefore, preventing an open fallopian
17	they are stating here. I think that	17	tube path to the ovary, that that would
18	what	18	not prevent the passage of talc to the
19	A. Well, that's	19	ovary?
20	Q Houghton is stating is,	20	MR. FROST: Objection.
21	furthermore, tubal ligation and	21	THE WITNESS: There's no
22	hysterectomy, which would eliminate the	22	evidence suggesting that talc
23	pathway of talc particles to the ovaries	23	particles migrate to the ovary, is
24	are associated with a reduced risk and	24	what I'm saying.
		I .	

84 (Pages 330 to 333)

	Page 334		Page 336
1	BY MR. SMITH:	1	Doctor, have you did you rely on
2	Q. Well, we talked about Taher	2	Huncharek 2007 and Langseth 2008 for your
3	earlier, the study that you hadn't seen	3	opinions in this case?
4	in 2018 regarding Health Canada. Do you	4	A. I did. But not with regard
5	recall that?	5	to talc migration to the ovaries, which
6	A. That's a meta-analysis of an	6	was not examined in any of these studies.
7	unpublished paper. He did not look at	7	Q. Well, Langseth down here at
8	migration to the ovaries.	8	the bottom, quote, "The evidence of talc
9	Q. Okay. And in that study it	9	migration of the ovaries lends
10	says, "Women with prior ligation of the	10	credibility to such a possible
11	fallopian tubes showed a significant	11	association."
12	reduction in risk against ovarian cancer	12	Would you agree or disagree
13	compared to hysterectomy." And then it	13	with that?
14	says, "In a recent meta-analysis, the	14	MR. FROST: Objection.
15	authors reported a negative association	15	THE WITNESS: I would
16	of tubal ligation (27 studies) and	16	disagree. His studies did not
17	hysterectomy (15 studies) with the risk	17	show talc migration to the
18	of ovarian cancer. This negative	18	ovaries.
19	association was more apparent in women	19	BY MR. SMITH:
20	who had surgery at an early stage. A	20	Q. Okay. And then we have
21	highly plausible mechanism for this	21	Mills in 2004, Gertig in did you rely
22	association, as suggested by the authors,	22	on Mills for migration opinions in this
23	involves blocking of ascent of agents	23	case? I'm looking at the I'm sorry.
24	such as talc to the ovaries."	24	MR. FROST: I take it this
24	such as tale to the ovaries.	24	MR. PROST. I take it tills
	Page 335		Page 337
1	Would you agree with that or	1	is the back side of that sheet?
2	disagree with that statement from Taher?	2	MR. SMITH: Yeah.
3	MR. FROST: Objection.	3	THE WITNESS: I'm looking.
4	THE WITNESS: I disagree	4	BY MR. SMITH:
5	with the statement. There is no	5	Q. Mills 2004 for migration in
6	evidence supporting a biological	6	this case?
7	plausibility of migration or	7	A. Oh, he's here Mills is
8	. 1		71. On, he's here willis is
O	translocation of talc to the	8	mentioning migration from the vagina
9	ovaries. In fact, there's a lot	8 9	
			mentioning migration from the vagina
9	ovaries. In fact, there's a lot	9	mentioning migration from the vagina through the peritoneal cavity to the
9 10	ovaries. In fact, there's a lot of information showing that that	9 10	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything
9 10 11	ovaries. In fact, there's a lot of information showing that that doesn't exist.	9 10 11	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal
9 10 11 12	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH:	9 10 11 12	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries,
9 10 11 12 13	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH:  Q. So you don't believe in	9 10 11 12 13	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.
9 10 11 12 13 14	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH:  Q. So you don't believe in retrograde menstruation in women?	9 10 11 12 13 14	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.  Q. Okay. And Gertig, did you
9 10 11 12 13 14 15	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH: Q. So you don't believe in retrograde menstruation in women?  MR. FROST: Objection.	9 10 11 12 13 14 15	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.  Q. Okay. And Gertig, did you rely on that for any of your
9 10 11 12 13 14 15	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH: Q. So you don't believe in retrograde menstruation in women? MR. FROST: Objection. THE WITNESS: I don't	9 10 11 12 13 14 15 16	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.  Q. Okay. And Gertig, did you rely on that for any of your A. I relied on it for the
9 10 11 12 13 14 15 16	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH: Q. So you don't believe in retrograde menstruation in women? MR. FROST: Objection. THE WITNESS: I don't believe in it?	9 10 11 12 13 14 15 16 17	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.  Q. Okay. And Gertig, did you rely on that for any of your A. I relied on it for the epidemiology, not for the statement that
9 10 11 12 13 14 15 16 17	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH: Q. So you don't believe in retrograde menstruation in women? MR. FROST: Objection. THE WITNESS: I don't believe in it?  BY MR. SMITH: Q. Does it not exist?	9 10 11 12 13 14 15 16 17 18	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.  Q. Okay. And Gertig, did you rely on that for any of your A. I relied on it for the epidemiology, not for the statement that talc is able to migrate.
9 10 11 12 13 14 15 16 17 18	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH: Q. So you don't believe in retrograde menstruation in women? MR. FROST: Objection. THE WITNESS: I don't believe in it?  BY MR. SMITH: Q. Does it not exist?	9 10 11 12 13 14 15 16 17 18 19	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.  Q. Okay. And Gertig, did you rely on that for any of your A. I relied on it for the epidemiology, not for the statement that talc is able to migrate.  Q. And Ness 1999, we discussed
9 10 11 12 13 14 15 16 17 18 19 20	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH: Q. So you don't believe in retrograde menstruation in women? MR. FROST: Objection. THE WITNESS: I don't believe in it?  BY MR. SMITH: Q. Does it not exist? A. It happens in a very small proportion, and that's entirely different	9 10 11 12 13 14 15 16 17 18 19 20	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.  Q. Okay. And Gertig, did you rely on that for any of your A. I relied on it for the epidemiology, not for the statement that talc is able to migrate.  Q. And Ness 1999, we discussed that. You've looked at those studies in
9 10 11 12 13 14 15 16 17 18 19 20 21	ovaries. In fact, there's a lot of information showing that that doesn't exist.  BY MR. SMITH: Q. So you don't believe in retrograde menstruation in women? MR. FROST: Objection. THE WITNESS: I don't believe in it?  BY MR. SMITH: Q. Does it not exist? A. It happens in a very small	9 10 11 12 13 14 15 16 17 18 19 20 21	mentioning migration from the vagina through the peritoneal cavity to the ovaries. No, I've never seen anything showing that pathway through a peritoneal cavity from the vagina to the ovaries, no.  Q. Okay. And Gertig, did you rely on that for any of your A. I relied on it for the epidemiology, not for the statement that talc is able to migrate.  Q. And Ness 1999, we discussed that. You've looked at those studies in 2000, correct?

85 (Pages 334 to 337)

## Case 3:16-md-02738-MAS-RLS Document 9731-6 Filed 05/07/19 Page 87 of 130 PageID: 33175 Brooke T. Mossman, M.S., Ph.D.

	Page 338		Page 340
1	Those are outdated, and they're	1	transmigration in this case?
2	hypotheses papers that didn't look at	2	A. Hamilton, I don't recall
3	migration directly.	3	that paper. I'd have to look at it.
4	Q. What about Cramer '99 or	4	Q. It says, "There is evidence
5	Heller '96?	5	of transport of particulate material into
6	A. Cramer found the same amount	6	the female peritoneum by the transvaginal
7	of material in ovarian I should say in	7	route in both human and animal studies."
8	the ovaries of individuals who did use	8	Would you agree or disagree
9	and did not use tale. So I would not	9	with that?
10	support that. His evidence has just been	10	A. Where are you now? I'm
11	looking at by pathology. So I	11	sorry.
12	would he did not perform migration	12	No, I don't think that's
13	studies. Heller also did not.	13	been shown. The presence of talc has
14	Q. You're saying that	14	been shown. It doesn't correlate with
15	Dr. Cramer in 1999 found talc in people	15	talc use. But the pathway, if any, is
16	exposed and not exposed?	16	
17	MR. FROST: Objection.	17	unclear, and certainly not from the
18	THE WITNESS: I have to look	18	perineum.
19			Q. "Direct communication
20	at yeah, that isn't what I	19	between the external environment and the
21	said. He found that talc I	20	peritoneal cavity exist in the female via
22	believe it was talc was in	21	her genital tract."
23	ovarian tissues, and it didn't	22	Would you agree with that?
	necessarily correlate with talc	23	MR. FROST: Objection.
24	use. But I'd have to go back and	24	THE WITNESS: I don't know
	Page 339		Page 341
1	Page 339 look at that.	1	Page 341 what "communication" means.
2	•	1 2	what "communication" means. Certainly the genital tract is not
	look at that.	1 2 3	what "communication" means.
2	look at that. BY MR. SMITH:	1 2 3 4	what "communication" means. Certainly the genital tract is not an open system. BY MR. SMITH:
2 3	look at that. BY MR. SMITH: Q. It A. I could be confusing that	1 2 3 4 5	what "communication" means. Certainly the genital tract is not an open system.
2 3 4	look at that. BY MR. SMITH: Q. It	1 2 3 4 5 6	what "communication" means. Certainly the genital tract is not an open system. BY MR. SMITH:
2 3 4 5	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me.	1 2 3 4 5 6	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's
2 3 4 5 6	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you		what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's
2 3 4 5 6 7	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me.	1 2 3 4 5 6 7 8	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system?
2 3 4 5 6 7 8	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper,		what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there
2 3 4 5 6 7 8 9	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me?	8 9	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms,
2 3 4 5 6 7 8 9	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's	8 9 10	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin
2 3 4 5 6 7 8 9 10 11	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of	8 9 10 11	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia,
2 3 4 5 6 7 8 9 10 11 12	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and	8 9 10 11 12	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal
2 3 4 5 6 7 8 9 10 11 12 13	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies.	8 9 10 11 12 13	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract.
2 3 4 5 6 7 8 9 10 11 12 13 14	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies. Q. What about Hamilton 1986?	8 9 10 11 12 13 14	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of particulate material from the vagina to
2 3 4 5 6 7 8 9 10 11 12 13 14 15	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies.	8 9 10 11 12 13 14 15	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies. Q. What about Hamilton 1986? MR. FROST: Can you raise	8 9 10 11 12 13 14 15 16	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of particulate material from the vagina to the peritoneal cavity has been established."
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies. Q. What about Hamilton 1986? MR. FROST: Can you raise the sheet? MR. SMITH: Yeah.	8 9 10 11 12 13 14 15 16 17	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of particulate material from the vagina to the peritoneal cavity has been established."  Do you agree or disagree
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies. Q. What about Hamilton 1986? MR. FROST: Can you raise the sheet? MR. SMITH: Yeah. MR. FROST: Thanks.	8 9 10 11 12 13 14 15 16 17 18 19	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of particulate material from the vagina to the peritoneal cavity has been established."  Do you agree or disagree with that quote from Hamilton?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies. Q. What about Hamilton 1986? MR. FROST: Can you raise the sheet? MR. SMITH: Yeah. MR. SMITH: Sure.	8 9 10 11 12 13 14 15 16 17 18 19 20	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of particulate material from the vagina to the peritoneal cavity has been established."  Do you agree or disagree with that quote from Hamilton? MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies. Q. What about Hamilton 1986? MR. FROST: Can you raise the sheet? MR. SMITH: Yeah. MR. SMITH: Sure. BY MR. SMITH:	8 9 10 11 12 13 14 15 16 17 18 19 20 21	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of particulate material from the vagina to the peritoneal cavity has been established."  Do you agree or disagree with that quote from Hamilton?  MR. FROST: Objection. THE WITNESS: From the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies. Q. What about Hamilton 1986? MR. FROST: Can you raise the sheet? MR. SMITH: Yeah. MR. FROST: Thanks. MR. SMITH: Sure. BY MR. SMITH: Q. What about Hamilton 1986?	8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of particulate material from the vagina to the peritoneal cavity has been established."  Do you agree or disagree with that quote from Hamilton?  MR. FROST: Objection.  THE WITNESS: From the vagina, I would have to go back
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	look at that. BY MR. SMITH: Q. It A. I could be confusing that with Heller without the papers in front of me. Q. And Heller '96, have you looked at those papers that paper, excuse me? A. I did. And again, it's looking at what's there in the ovary and not how it got there. And that's true of Cramer as well. These are pathology studies. Q. What about Hamilton 1986? MR. FROST: Can you raise the sheet? MR. SMITH: Yeah. MR. SMITH: Sure. BY MR. SMITH:	8 9 10 11 12 13 14 15 16 17 18 19 20 21	what "communication" means. Certainly the genital tract is not an open system.  BY MR. SMITH: Q. You don't believe the female genital tract is an open system? A. I believe that it's it's not open to the environment, that there are a variety of protective mechanisms, beginning with the external perineal skin and other mechanisms such as the labia, and clearance mechanisms through normal clearance of the tract. Q. "The case of migration of particulate material from the vagina to the peritoneal cavity has been established."  Do you agree or disagree with that quote from Hamilton?  MR. FROST: Objection. THE WITNESS: From the

86 (Pages 338 to 341)

	Page 342		Page 344
1	material into the vagina,	1	A. It says that retrograde
2	particularly in animals that are	2	migration was not considered to be
3	manipulated.	3	plausible by the group, yes. There is a
4	And I think that's what	4	statement on that in the IARC monograph.
5	they're talking about here.	5	Q. Okay. Are you familiar with
6	BY MR. SMITH:	6	the Phillip's rabbit study that found
7	Q. So do you believe that if	7	tale can migrate to the fallopian tubes?
8	talc is placed into the vagina, that it	8	Phillips.
9		9	A. I believe that was one where
	then can transmigrate through the female		
10	genital tract to the ovary?	10	it was it wasn't perineal application.
11	MR. FROST: Objection.	11	I do remember that study. And it was
12	THE WITNESS: I have not	12	it may have been vaginal or applied
13	seen those studies, no.	13	directly to the ovary. I'm not certain.
14	BY MR. SMITH:	14	There was an earlier study.
15	Q. You haven't seen	15	Q. Is this in your reference
16	A. Particulate matter.	16	materials? I don't see it?
17	Q. You haven't seen any of the	17	A. No, it's in the IARC. Well,
18	inert particle studies that show any of	18	I reference the IARC monograph that has a
19	that testing like	19	lot of references. And I believe that
20	A. There is one study, I	20	Phillips is in that one.
21	believe, in the 1980s that looks at this	21	Q. The Hamilton, last quote,
22	in women in a supine position. But these	22	"The rhythmic muscular contractions of
23	studies that have been done, for example,	23	the uterus that can occur spontaneous and
24	in rabbits and in monkeys argue against	24	the elicit current's established"
	Page 343		Page 345
1	vaginal or perineal migration of talc to	1	"established by the epithelial cells of
1 2	vaginal or perineal migration of talc to the ovaries.	1 2	
			"established by the epithelial cells of
2	the ovaries.	2	"established by the epithelial cells of the genital tract may contribute to the translocation process."
2	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina.	2 3	"established by the epithelial cells of the genital tract may contribute to the
2 3 4	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal	2 3 4	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?
2 3 4 5	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of	2 3 4 5	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.
2 3 4 5 6 7	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in	2 3 4 5 6 7	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection. THE WITNESS: In normal
2 3 4 5 6 7 8	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate	2 3 4 5 6 7 8	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a
2 3 4 5 6 7 8	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?	2 3 4 5 6 7 8	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.
2 3 4 5 6 7 8 9	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.	2 3 4 5 6 7 8 9	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements	2 3 4 5 6 7 8 9 10 11	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the
2 3 4 5 6 7 8 9 10 11 12	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC	2 3 4 5 6 7 8 9 10 11 12	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?
2 3 4 5 6 7 8 9 10 11 12 13	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is,	2 3 4 5 6 7 8 9 10 11 12 13	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I
2 3 4 5 6 7 8 9 10 11 12 13	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this	2 3 4 5 6 7 8 9 10 11 12 13 14	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled
2 3 4 5 6 7 8 9 10 11 12 13 14	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That	2 3 4 5 6 7 8 9 10 11 12 13 14 15	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the experimental studies have been	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC because of the experimental flaws.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the experimental studies have been shown in women with clearance	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC because of the experimental flaws.  Q. I didn't see do you have
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the experimental studies have been shown in women with clearance mechanisms that are compromised by	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC because of the experimental flaws.  Q. I didn't see do you have Dr. Cramer and Dr. Godleski's 2007 case
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the experimental studies have been shown in women with clearance mechanisms that are compromised by infection or other pathologies.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC because of the experimental flaws.  Q. I didn't see do you have  Dr. Cramer and Dr. Godleski's 2007 case study on a woman who was a chronic or
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the experimental studies have been shown in women with clearance mechanisms that are compromised by infection or other pathologies.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC because of the experimental flaws.  Q. I didn't see do you have  Dr. Cramer and Dr. Godleski's 2007 case study on a woman who was a chronic or a long-time genital talc user and their
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the experimental studies have been shown in women with clearance mechanisms that are compromised by infection or other pathologies.  BY MR. SMITH:  Q. You're saying that IARC, the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC because of the experimental flaws.  Q. I didn't see do you have  Dr. Cramer and Dr. Godleski's 2007 case study on a woman who was a chronic or a long-time genital talc user and their findings of translocation? Have you
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the experimental studies have been shown in women with clearance mechanisms that are compromised by infection or other pathologies.  BY MR. SMITH:  Q. You're saying that IARC, the 2010 IARC monograph, says that	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC because of the experimental flaws.  Q. I didn't see do you have  Dr. Cramer and Dr. Godleski's 2007 case study on a woman who was a chronic or a long-time genital talc user and their findings of translocation? Have you looked at that article?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	the ovaries.  Q. I'm talking about if the talc is placed inside the woman's vagina. I'm not talking about from perineal dusting. And my question is, are you of the opinion that that talc, if placed in the vagina of a woman, can transmigrate to the fallopian tubes in a woman?  MR. FROST: Objection.  THE WITNESS: My statements would be the same as the IARC concludes on this. And that is, that there's no evidence that this happens in healthy women. That what has been done in terms of the experimental studies have been shown in women with clearance mechanisms that are compromised by infection or other pathologies.  BY MR. SMITH:  Q. You're saying that IARC, the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	"established by the epithelial cells of the genital tract may contribute to the translocation process."  Do you agree or disagree with that statement?  MR. FROST: Objection.  THE WITNESS: In normal individuals, this would not be a plausible mechanism.  BY MR. SMITH:  Q. Are you familiar with the Kuntz studies about the peristolic pump?  A. These are the ones where I believe they looked at or labeled spermatozoa or other particles. And I know they were discounted by the IARC because of the experimental flaws.  Q. I didn't see do you have  Dr. Cramer and Dr. Godleski's 2007 case study on a woman who was a chronic or a long-time genital talc user and their findings of translocation? Have you

87 (Pages 342 to 345)

2 my searches, no. 2 talking abo	Page 348
2 my searches, no. 2 talking abo	VITNESS: No, but I'm
	out the relevance. This
3 Q. Okay. I'm going to mark 3 is looking	at talc in lymph nodes.
	you look at studies by
5 (Document marked for 5 Dodson, et	t cetera, that have
6 identification as Exhibit 6 looked and	d found particles of all
7 Mossman-33.) 7 different ty	ypes, including talc,
8 BY MR. SMITH: 8 in lymph r	nodes all over the body
9 Q. And this is entitled, 9 in the gene	eral population.
10 "Correlative polarizing light and 10 BY MR. SMIT	TH:
11 scanning electron microscopy for the 11 Q. Well,	then how did it get
12 assessment of talc in pelvic region" 12 there?	
13 "region lymph nodes." Sandra McDonald is 13 A. I told	you that lymph nodes
14 the lead author. 14 are a flow systematical properties of the lead author.	em that collect they
	garbage cans for inhaled
	aterials in general.
	ee. My question to you
	ou agree they have been
19 Q. It's not in your materials 19 found in lymph	n nodes, they either got
	nhalation or ingestion or
21 A. No. Mainly because these 21 through some of	other route such as a
22 are in pelvic lymph nodes, not in the 22 genital genit	al route.
23 ovary. So I would not have included this 23 How d	lid it get how did
24 as compelling evidence one way or 24 talc, in your op	pinion, get to lymph nodes
Page 347	Page 349
1 another. It's been shown by others that 1 inside human b	eings if it wasn't by one
2 any types of particles accumulate in 2 of those routes's	
3 lymph nodes all over the body. It's a 3 A. It	
	ROST: Objection.
5 would not give this any relevance, 5 THE W	VITNESS: It would be
6 certainly not to the development of 6 primarily b	by inhalation. We know
7 ovarian cancers. 7 that. And	ingestion. Talc is in
8 Q. So have you read this 8 a lot of diff	ferent food processes.
9 article and and what it discusses 9 It's in plast	tics. We're all
about transmigration of particles in 10 exposed to	
the in the female genital tract? 11 BY MR. SMIT	Ή:
	you ever read the FDA's
· · · · · · · · · · · · · · · · · · ·	zen's petition on talc?
	Γhat I never would
	t in the scientific
16 case? 16 literature.	
	s, "While there exists
to ovarian cancers as talc has been found 18 no direct proof	of tale and ovarian
1	the potential for
in lymph nodes all over the body in the last carcinogenesis,	=
in lymph nodes all over the body in the carcinogenesis, normal population.	migrate from the perineum
in lymph nodes all over the body in the normal population.  Q. Well, that's not it's  19 carcinogenesis, particulates to 19	=
in lymph nodes all over the body in the normal population.  Q. Well, that's not it's 21 and vagina to the that's not what it's discussing in this 22 indisputable."	migrate from the perineum he peritoneal cavity is
in lymph nodes all over the body in the normal population.  Q. Well, that's not it's 21 and vagina to the that's not what it's discussing in this 22 indisputable."	migrate from the perineum

88 (Pages 346 to 349)

	Page 350		Page 352
1	MR. FROST: Objection.	1	quantitating exposure of different
2	THE WITNESS: I would assume	2	materials to cells and culture, is based
3	that this report is or letter	3	on their surface area determinations
4	is from an individual. Certainly	4	because it's the surface area that
5	no balanced committee would make	5	governs their interaction with the cell
6	that statement.	6	surface.
7	BY MR. SMITH:	7	Q. Okay. And you did a
8	Q. Okay. "It is, therefore,	8	conversion, did you not? It's do you
9	plausible that perineal talc and other	9	have the Hillegass study by any chance?
10	particulate that reaches the endometrial	10	Probably not. Let me grab it for you.
11	cavity, fallopian tubes and ovaries may	11	MR. FROST: Do you have one?
12	elicit a foreign body-type reaction and	12	MR. SMITH: Yeah, I got it.
13	inflammatory that" "response that in	13	(Document marked for
14	some exposed women may progress to	14	identification as Exhibit
15	epithelial ovarian cancers."	15	Mossman-34.)
16	Do you agree or disagree	16	BY MR. SMITH:
17	with that statement?	17	Q. I notice one of the comments
18	MR. FROST: Objection.	18	to and let's go to that right now. I
19	THE WITNESS: I think it's	19	have got that over here. Now we might be
20	hypotheses. It's unproven and I'm	20	branching out to this guy here. I don't
21	sure a committee would not have	21	know.
22	made that statement.	22	If we look at the front of
23	BY MR. SMITH:	23	the second page. It says this is
24	Q. I want to talk about your	24	reviewers to the study. Do you see that,
	Page 351		Page 353
1	Shukla study. Is that okay?	1	Doctor? This is what you provided to me.
2	A. Sure.	2	A. Right. Okay.
3	Q. Do you you don't do	3	Q. Okay. I'm going to attach
4	you have a copy of it?		
		4	that excuse me. Hold on. I'm going
5	MR. FROST: Yeah, I was	4 5	to attach that as exhibit let's attach
5 6	MR. FROST: Yeah, I was going to say we don't have a copy.	5 6	to attach that as exhibit let's attach Shukla as Exhibit 34.
5 6 7	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on.	5	to attach that as exhibit let's attach Shukla as Exhibit 34. (Document marked for
5 6 7 8	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was	5 6	to attach that as exhibit let's attach Shukla as Exhibit 34. (Document marked for identification as Exhibit
5 6 7 8 9	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.)	5 6 7 8 9	to attach that as exhibit let's attach Shukla as Exhibit 34. (Document marked for identification as Exhibit Mossman-35.)
5 6 7 8 9	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH:	5 6 7 8 9	to attach that as exhibit let's attach Shukla as Exhibit 34. (Document marked for identification as Exhibit Mossman-35.) MR. SMITH: Let's do
5 6 7 8 9 10 11	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH: Q. Okay. Why did you use the	5 6 7 8 9 10 11	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this
5 6 7 8 9 10 11 12	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this	5 6 7 8 9 10 11 12	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer
5 6 7 8 9 10 11 12 13	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all?	5 6 7 8 9 10 11 12 13	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters,
5 6 7 8 9 10 11 12 13	MR. FROST: Yeah, I was going to say we don't have a copy.  MR. SMITH: Yeah. Hold on.  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all?  A. Okay. So we were we were	5 6 7 8 9 10 11 12 13 14	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of
5 6 7 8 9 10 11 12 13 14 15	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all? A. Okay. So we were we were interested in the study in comparing	5 6 7 8 9 10 11 12 13 14 15	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on
5 6 7 8 9 10 11 12 13 14 15 16	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all? A. Okay. So we were we were interested in the study in comparing various materials or particles, fibers,	5 6 7 8 9 10 11 12 13 14 15 16	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on the bottom.
5 6 7 8 9 10 11 12 13 14 15 16 17	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all? A. Okay. So we were we were interested in the study in comparing various materials or particles, fibers, at equal surface area concentrations.	5 6 7 8 9 10 11 12 13 14 15 16 17	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on the bottom.  (Document marked for
5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Yeah, I was going to say we don't have a copy.  MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.)  BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all?  A. Okay. So we were we were interested in the study in comparing various materials or particles, fibers, at equal surface area concentrations.  And we also expressed the data as equal	5 6 7 8 9 10 11 12 13 14 15 16 17	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on the bottom.  (Document marked for identification as Exhibit
5 6 7 8 9 10 11 12 13 14 15 16 17 18	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all? A. Okay. So we were we were interested in the study in comparing various materials or particles, fibers, at equal surface area concentrations.	5 6 7 8 9 10 11 12 13 14 15 16 17 18	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on the bottom.  (Document marked for identification as Exhibit Mossman-36.)
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	MR. FROST: Yeah, I was going to say we don't have a copy.  MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.)  BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all?  A. Okay. So we were we were interested in the study in comparing various materials or particles, fibers, at equal surface area concentrations.  And we also expressed the data as equal	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on the bottom.  (Document marked for identification as Exhibit Mossman-36.) BY MR. SMITH:
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. FROST: Yeah, I was going to say we don't have a copy.  MR. SMITH: Yeah. Hold on.  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all?  A. Okay. So we were we were interested in the study in comparing various materials or particles, fibers, at equal surface area concentrations.  And we also expressed the data as equal weight concentrations. So that we compare it historically to concentrations of materials used by others in other	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on the bottom.  (Document marked for identification as Exhibit Mossman-36.) BY MR. SMITH: Q. And this is from a reviewer.
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	MR. FROST: Yeah, I was going to say we don't have a copy. MR. SMITH: Yeah. Hold on. (Whereupon, a discussion was held off the record.) BY MR. SMITH: Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all? A. Okay. So we were we were interested in the study in comparing various materials or particles, fibers, at equal surface area concentrations. And we also expressed the data as equal weight concentrations. So that we compare it historically to concentrations of materials used by others in other studies.	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on the bottom.  (Document marked for identification as Exhibit Mossman-36.) BY MR. SMITH: Q. And this is from a reviewer. Methods, Page 6. "The dose of minerals
5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	MR. FROST: Yeah, I was going to say we don't have a copy.  MR. SMITH: Yeah. Hold on.  (Whereupon, a discussion was held off the record.)  BY MR. SMITH:  Q. Okay. Why did you use the concentrations that you did in this study, or why did y'all?  A. Okay. So we were we were interested in the study in comparing various materials or particles, fibers, at equal surface area concentrations.  And we also expressed the data as equal weight concentrations. So that we compare it historically to concentrations of materials used by others in other	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	to attach that as exhibit let's attach Shukla as Exhibit 34.  (Document marked for identification as Exhibit Mossman-35.)  MR. SMITH: Let's do Hillegass as 35. And then this collective exhibit of reviewer comments with the cover letters, it's May 8, 2009, University of Vermont, with Jedd Hillegass on the bottom.  (Document marked for identification as Exhibit Mossman-36.) BY MR. SMITH: Q. And this is from a reviewer.

	Page 354		Page 356
1	in the recent publication, Shukla, it	1	Q. If I'm looking at asbestos
2	would be helpful if some information is	2	below at 15 micrometers squared per
3	provided about the surface area of the	3	centimeter squared, how many what
4	various minerals tested, as well as how	4	would that translate to to micrograms per
5	this translates into micrograms per	5	centimeter squared?
6	centimeter squared," right?	6	A. Micrograms, it would
7	A. Yes.	7	Okay. So that would equal one.
8	Q. And then your response or	8	Q. 15 would be one, right?
9	y'all's response was, "Additional	9	A. With asbestos.
10	information regarding the surface area of	10	Q. Right. And 75 would be
11	particulates used in these studies was	11	A. 75 would be five.
12	added to the methods section along with	12	Q. Five, okay.
13	how many micrograms squared per	13	A. And 15 would be
14	centimeter squared translates into	14	approximately well, it's 16.2, would
15	micrograms per centimeter squared."	15	be one with talc. And it would be, again
16	Right?	16	in the same range, 75 versus 81 talc.
17	A. Okay. So I'm trying to	17	So we're actually adding
18	figure out whether this is with regard to	18	talc at higher surface concentrations but
19	the Hillegass study; is that correct?	19	fractionally so, as compared to asbestos.
20	Q. Correct.	20	Q. My question is, would the 15
21	A. Okay.	21	micrometers squared per centimeter
22	Q. All right. This is my	22	
23	question.	23	squared for talc that you used the
24	A. Sure.	24	concentration of in this case, would that
2.1	A. Suic.	24	equal one microgram per centimeter
	Page 355		Page 357
1		1	
	Q. The concentrations that you	1 2	squared?
1 2 3	Q. The concentrations that you used, that being and I'm talking about		squared? A. Approximately, yes.
2	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34	2	squared? A. Approximately, yes. Q. Okay. That's what I
2 3 4	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter	2 3	squared? A. Approximately, yes. Q. Okay. That's what I thought.
2	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per	2 3 4	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable.
2 3 4 5	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to	2 3 4 5	squared? A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per
2 3 4 5 6 7	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?	2 3 4 5 6	squared? A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared
2 3 4 5 6	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you	2 3 4 5 6 7	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five
2 3 4 5 6 7 8	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.	2 3 4 5 6 7 8	squared? A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared
2 3 4 5 6 7 8	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.	2 3 4 5 6 7 8	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes.
2 3 4 5 6 7 8 9	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.	2 3 4 5 6 7 8 9	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right?
2 3 4 5 6 7 8 9 10 11	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll	2 3 4 5 6 7 8 9 10	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same
2 3 4 5 6 7 8 9 10 11	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And	2 3 4 5 6 7 8 9 10 11	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed.
2 3 4 5 6 7 8 9 10 11 12	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and tale, you can see here that the upper column, going	2 3 4 5 6 7 8 9 10 11 12 13	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay.
2 3 4 5 6 7 8 9 10 11 12 13	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera,	2 3 4 5 6 7 8 9 10 11 12 13	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are
2 3 4 5 6 7 8 9 10 11 12 13 14	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera, that is the comparative weight per so	2 3 4 5 6 7 8 9 10 11 12 13 14 15	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are appropriate to use in in vitro studies to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera, that is the comparative weight per so it's weight per unit area of dish.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera, that is the comparative weight per so	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are appropriate to use in in vitro studies to determine the pathogenicity of minerals such as talc and asbestos?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera, that is the comparative weight per so it's weight per unit area of dish.  So that's your weight concentration.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are appropriate to use in in vitro studies to determine the pathogenicity of minerals such as talc and asbestos? A. Yes. And that's based upon
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera, that is the comparative weight per so it's weight per unit area of dish.  So that's your weight concentration.  The numbers below are your	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are appropriate to use in in vitro studies to determine the pathogenicity of minerals such as talc and asbestos? A. Yes. And that's based upon the toxicity data that is provided in A
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera, that is the comparative weight per so it's weight per unit area of dish.  So that's your weight concentration.  The numbers below are your surface area concentrations.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are appropriate to use in in vitro studies to determine the pathogenicity of minerals such as talc and asbestos? A. Yes. And that's based upon the toxicity data that is provided in A and B. So they're comparable
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera, that is the comparative weight per so it's weight per unit area of dish.  So that's your weight concentration.  The numbers below are your surface area concentrations.  Q. Okay. So let's get on the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are appropriate to use in in vitro studies to determine the pathogenicity of minerals such as talc and asbestos? A. Yes. And that's based upon the toxicity data that is provided in A and B. So they're comparable concentrations. The asbestos as we can
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. The concentrations that you used, that being and I'm talking about Shukla. I'm talking about 34 15 micrometers squared per centimeter squared and 75 micrometers squared per centimeter squared, would translate to what micrograms per centimeter squared?  A. Okay. And that's if you look at Figure 2 in Shukla, Page 4 of 10.  Q. Yep.  A. And the top panel, you'll see the vertical and the horizontal. And if we look at asbestos and talc, you can see here that the upper column, going from 015 and from talc 15, et cetera, that is the comparative weight per so it's weight per unit area of dish.  So that's your weight concentration.  The numbers below are your surface area concentrations.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	squared?  A. Approximately, yes. Q. Okay. That's what I thought. A. Yes. They're comparable. Q. Okay. And 75 micrograms per centimeter squared micrograms squared per centimeter squared would equal five micrograms per centimeter squared, right? A. Yes. Q. Okay. Now I'm on the same page. That's what I needed. A. Okay. Q. All right. And do you believe that those concentrations are appropriate to use in in vitro studies to determine the pathogenicity of minerals such as talc and asbestos? A. Yes. And that's based upon the toxicity data that is provided in A and B. So they're comparable

90 (Pages 354 to 357)

the dose-response that we did with five concentrations of tale ranging from one 2 to 20.  4 Q. Okay. So tale you tested at one microgram per centimeter squared, 6 five micrograms per centimeter squared, 16 five micrograms per centimeter squared, 17 ten micrograms per centimeter squared, 18 and 20 microgram per centimeter squared, 29 A. 15 and 20?  10 Q. 10, 15, and 20?  11 A. Yes.  12 Q. Okay.  13 A. So the message is that you 20 don't want to work with something that's 20 going to kill all the cells, so you can't 25 institution it is.  14 don't want to work with something that's 20 going to kill all the cells, so you can't 20 institution of absetsots. 20 Exhibit 27 so I won't forget this. 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for 23 identification as Exhibit 23 institution as Exhibit 24 Mossman-37.)  Page 359  1 BY MR. SMITH: 20 Here we are, Shukla, 20 MR. FROST: Objection. 21 Shubit 37. 20 micrograms per centimeter squared, 21 country. 24 MR. SMITH: 25 MR. SMITH: 26 MR. SMITH: 27 MR. SMITH: 28 MR. SMITH: 29 MR. SMITH: 29 MR. SMITH: 20 MR. SMITH: 20 MR. SMITH: 20 MR. SMITH: 21 Shibit 37. 20 micrograms per centimeter squared, 21 country. 24 MR. SMITH: 25 MR. SMITH: 26 MR. SMITH: 27 MR. SMITH: 28 MR. SMITH: 29 MR. SMITH: 29 MR. SMITH: 20 MR. SMITH: 20 MR. SMITH: 20 MR. SMITH: 21 Sexhibit 37. 20 micrograms per centimeter squared, 21 data din't appear to be with regard to 22 the other materials. 24 data dard appear to be with regard to 24 the other materials. 24 data dard appear to be with regard to 24 the other materials. 24 the other materials. 25 mark the other data dard appear to be with regard to 24 the other materials. 24 the other materials. 25 mark the other data din't appear to be with regard to 25 mark the other data din't appear to be with regard to 25 mark the other data din't appear to be with regard to 25 mark the other data din't appear to be with regard to 25 mark the other data din't appear to be with regard to 25 mark the other data din't appear to be with		Page 358		Page 360
2 concentrations of tale ranging from one 3 to 20. 3 to 20. 4 Q. Okay. So tale you tested at 5 one microgram per centimeter squared, 6 five micrograms per centimeter squared, 7 ten microgram per centimeter squared, 8 and 20 microgram per centimeter squared, 9 A. 15 and 20. 10 Q. 10, 15, and 20? 11 A. Ves. 12 Q. Okay. 13 A. So the message is that you 14 don't want to work with something that's 15 going to kill all the cells, so you can't 16 go higher. And in fact, that's a reason 17 that with time, we didn't look at the 18 higher concentration of asbestos. 19 Q. I want to attach this as 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for 23 identification as Exhibit 24 Mossman-37.)  Page 359  1 BY MR. SMITH: 2 Q. Okay. That's 5 Takeh' And this study used concentration 6 levels of tale, at one, five, 10, 15, 7 20 micrograms per centimeter squared, 8 correct? 9 A. Yes. 10 Q. Okay. You provided, as we discussed, progress reports to the IMA 16 during the course of this study; is that correct? 17 A. After a year, yes. We didn't pook at date dath't appear to be with regard to the other wartenials. 20 G. No, no, I'm just talking in general. I'm not talking about tary involved in regulatory and/or litigation. 21 G. No, no, I'm just talking in general. I'm not talking about any particular litigation. 22 G. No, no, I'm just talking in general. 23 G. And the sytonerod the 24 MR. SMITH: 25 G. Okay. You provided, as we discussed, progress reports to the IMA 26 didn't appear to be with regard to the other materials. 27 G. No, no, I'm just talking in general. 28 G. No, no, I'm just talking in general. 39 G. And the student and the other work was supported by a grant from the National Institutes of Health. 40 Leath. 41 G. Is it unusual to give progress reports to the with regard to the other materials. 4 G. Is it unusual to give progress reports to the with regard to the with microgram progration in the National Institutes of Health. 4 A. No. It's demanded from NIH, 5 A. No. It's demanded from NIH,	1	the dose-response that we did with five	1	A. They only sponsored a very
done with the talc. The other materials and the other work was supported by a grant from the National Institutes of five micrograms per centimeter squared, for micrograms per centimeter squared, ten micrograms per centimeter squared, and 20 microgram per centimeter squared, ten micrograms per centimeter squared, and 20 microgram per centimeter squared, and 20 micrograms pe			1	
4 Q. Okay. So talc you tested at 5 one microgram per centimeter squared, 6 five micrograms per centimeter squared, 7 ten micrograms per centimeter squared, 8 and 20 microgram per centimeter squared, 9 A. 15 and 20. 10 Q. 10, 15, and 20? 10 Q. 10, 15, and 20? 11 A. Yes. 11 for example. In other —in our institution it is. 11 Q. It is —is it —it is not 11 to example. In other —in our institution it is. 12 Q. It is —is it —it is not 12 Q. It is —is it —it is not 13 Q. It is —is it —it is not 14 don't want to work with something that's 15 going to kill all the cells, so you can't 16 go higher. And in fact, that's a reason 16 higher concentration of absetos. 18 higher concentration of absetos. 18 P. Q. I want to attach this as 19 Q. I want to attach this as 19 Q. I want to attach this as 19 G. I want to attach this attach the attach the attach this attach the attach the attach this attach the attach the attach the attach th	3			
one micrograms per centimeter squared, five micrograms per centimeter squared, and 20 microgram per centimeter squared, and 20 micrograms per centimeter squared, and	4	Q. Okay. So tale you tested at	4	
fe five micrograms per centimeter squared, ten micrograms per centimeter squared?  8 and 20 microgram per centimeter squared?  9 A. 15 and 20.  10 Q. 10, 15, and 20?  11 A. Yes.  12 Q. Okay.  13 A. So the message is that you don't want to work with something that's going to kill all the cells, so you can't that with time, we didn't look at the higher concentration of asbestos.  19 Q. I want to attach this as  19 Q. I want to attach this as  20 Exhibit 27 so I won't forget this.  21 Because I could.  22 (Document marked for identification as Exhibit And bestermine Pathogenicity of Asbestos and Talc.' And this study used concentration of levels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and this study used concentration believels of fale, at one, five, lo, 15, and the study used concentration believels of fale, at one, five, lo, 15, and the study used concentration believels of fale, at one, five, lo, 15, and the study used concentration believels of fale, at one, five, lo, 15, and the study used concentration believels of fale, at one, five, lo, 15, and the study used	5		5	
ten micrograms per centimeter squared, and 20 micrograms per centimeter squared?  A. 15 and 20.  Q. 10, 15, and 20?  11	6		6	
and 20 microgram per centimeter squared?  A. 15 and 20.  Q. 10, 15, 15, and 20?  10 Q. 10, 15, 15, and 20?  11 A. Yes.  12 Q. Okay.  A. So the message is that you  13 Q. It is — is it — it is not unusual to submit proposal to industry involved in regulatory and/or litigation issues?  A. Could you say that again.  MR. FROST: Objection.  BY MR. SMITH:  Q. Here we are, Shukla,  "Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Talc." And this study used concentration for levels of talc, at one, five, 10, 15,  Decame of the wish side of the work of the study used concentration for levels of talc, at one, five, 10, 15,  MR. SMITH:  Q. Here we are, Shukla,  "Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Talc." And this study used concentration for levels of talc, at one, five, 10, 15,  MR. SMITH:  Q. Mere we are, Shukla,  "Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Talc." And this study used concentration for levels of talc, at one, five, 10, 15,  MR. SMITH:  Q. OKay.  A. No. It's demanded from NIH, for example. In other — in our institution it is.  Q. It is — is it — it is not unusual to submit proposal to industry involved in institution it is.  Q. Sure. It is not unusual to submit proposals to industry involved in regulatory and/or litigation issues?  MR. FROST: Objection.  BY MR. SMITH:  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation issues?  A. To my knowledge, these institutions were not involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in regulatory and/or litigation issues?  A. Fine.  Q. Im just talking in general terms, it is not unusu	7		7	Q. Is it unusual to give
10 Q. 10, 15, and 20? 11 A. Yes. 12 Q. Okay. 13 A. So the message is that you 14 don't want to work with something that's 15 going to kill all the cells, so you can't 16 go higher. And in fact, that's a reason 17 that with time, we didn't look at the 18 higher concentration of asbestos. 19 Q. I want to attach this as 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for 23 identification as Exhibit 24 Mossman-37.)  Page 359  Page 359  Page 361  A. To my knowledge, these institutions were not involved in litigation issues? A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm stemanded from NIH, for example. In other — in our institution it is. Q. It is — is it — it is not unusual to submit proposals to industry involved in issues, correct? A. Could you say that again. MR. FROST: Objection. BYMR. SMITH: Q. Sure. It is not unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues? A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country. Q. No, no, I'm yet talking in general terms, it is not unusual to submit proposals to industry that might be about any particular litigation. I'm not talking about apair. A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved — that may be involved in regulatory and/or litigation issues? A. To my knowledge, these institutions were not involved in regulatory and/or litigation issues? A. To my knowledge, these institutions	8		8	
11 A. Yes. 12 Q. Okay. 13 A. So the message is that you 14 don't want to work with something that's 15 going to kill all the cells, so you can't 16 go higher. And in fact, that's a reason 17 that with time, we didn't look at the 18 higher concentration of asbestos. 19 Q. I want to attach this as 19 Q. I want to attach this as 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for 23 identification as Exhibit 24 Mossman-37.) 25 Page 359 26 Determine Pathogenicity of Asbestos and 27 Tale." And this study used concentration 28 levels of tale, at one, five, 10, 15, 29 A. Yes. 20 MR. SMITH: 21 BY MR. SMITH: 22 Q. Is that unusual to submit proposals to industry involved in regulatory and/or litigation issues? 27 MR. FROST: Objection. 28 MR. FROST: Objection. 29 MR. FROST: Objection. 20 BY MR. SMITH: 21 Q. Is that unusual to submit proposals to industry involved in regulatory and/or litigation issues? 23 MR. FROST: Objection. 24 Determine Pathogenicity of Asbestos and tale." And this study used concentration levels of tale, at one, five, 10, 15, 20 micrograms per centimeter squared, correct? 29 A. Yes. 20 MR. SMITH: 21 Q. Is that unusual to submit proposals to industry involved in regulatory and/or litigation issues? 25 A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country. 20 MR. SMITH: 21 BY MR. SMITH: 22 Q. No, no, l'm just talking in general. I'm not talking about tale litigation. 23 A. After a year, yes. We 24 didn't provide them with progress reports to the imability about tale litigation. 25 MR. FROST: Objection. 26 Page 361  27 A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country. 26 Q. No, no, l'm just talking in general terms, it is not unusual to submit proposals to industry involved in regulatory and/or litigation in 2005. All this work was done prior to litigation in 2005. All this work was done	9	A. 15 and 20.	9	research?
12 Q. Okay. 13 A. So the message is that you 14 don't want to work with something that's 15 going to kill all the cells, so you can't 16 go higher. And in fact, that's a reason 17 that with time, we didn't look at the 18 higher concentration of asbestos. 19 Q. I want to attach this as 19 Q. I want to attach this as 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for 23 identification as Exhibit 24 Mossman-37.)  Page 359  1 BY MR. SMITH: 2 Q. Here we are, Shukla, 3 "Appropriate Concentration Levels to 4 Determine Pathogenicity of Asbestos and 5 Tale." And this study used concentration 6 levels of tale, at one, five, 10, 15, 20 micrograms per centimeter squared, 8 correct? 4 A. Yes. 5 MR. SMITH: 6 Page 359  Page 361  P	10	Q. 10, 15, and 20?	10	A. No. It's demanded from NIH,
A. So the message is that you don't want to work with something that's going to kill all the cells, so you can't go higher. And in fact, that's a reason that with time, we didn't look at the higher concentration of asbestos.  18 higher concentration of asbestos.  19 Q. I want to attach this as 19	11	A. Yes.	11	for example. In other in our
don't want to work with something that's going to kill all the cells, so you can't go higher. And in fact, that's a reason that with time, we didn't look at the higher concentration of asbestos.  19 Q. I want to attach this as 19 BY MR. SMITH:  20 Exhibit 27 so I won't forget this.  21 Because I could.  22 (Document marked for dentification as Exhibit and MR. FROST: Objection.  23 identification as Exhibit 23 MR. FROST: Objection.  24 Mossman-37.)  25 Page 359  Page 359  Page 361  Determine Pathogenicity of Asbestos and Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  26 MR. SMITH: Okay. That's Exhibit 37 A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to the other atterials.  29 Q. And they sponsored the MA displayed to the MR. FROST: Objection.  20 unusual to submit proposal to industry indoved in regulatory and/or litigation issues, correct?  A. Could you say that again.  MR. FROST: Objection.  BY MR. SMITH:  Q. Sure. It is not unusual to submit proposals to industry involved in regulatory and/or litigation issues?  Page 359  Page 359  Page 361  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about talc litigation. I'm not talking about talc litigation. I'm not talking about talc litigation issues, is it?  MR. FROST: Objection.  14 Unusual to submit proposal to industry involved in regulatory and/or litigation issues, is it?  A. To my knowledge, these institutions were not involved in litigation ensuing in this country.  Q. No, no, I'm just talking in general terms, it is not unusual to submit proposals to industry involved in regulatory and/or litigation issues, so industry involved in re	12	Q. Okay.	12	institution it is.
don't want to work with something that's going to kill all the cells, so you can't go higher. And in fact, that's a reason that with time, we didn't look at the higher concentration of asbestos.  Recause I could. Clocument marked for didntification as Exhibit Mossman-37.)  Page 359  BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Here we are, Shukla, Mr. FROST: Objection. BY MR. SMITH:  Q. Is that unusual to submit proposals to industry involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about talc litigation.  Mr. FROST: Objection.  Mr. FROST:	13	A. So the message is that you	13	Q. It is is it it is not
16 go higher. And in fact, that's a reason 17 that with time, we didn't look at the 18 higher concentration of asbestos. 19 Q. I want to attach this as 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for 23 identification as Exhibit 24 Mossman-37.)  25 Page 359  1 BY MR. SMITH: 2 Q. Is that unusual to submit proposals to industry involved in regulatory and/or litigation issues? 26 MR. FROST: Objection. 27 MR. SMITH: 2 Q. Sure. It is not unusual to submit proposals to industry involved in regulatory and/or litigation issues? 28 MR. FROST: Objection. 29 MR. SMITH: 20 Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues? 3 involved in regulatory and/or litigation issues? 4 Determine Pathogenicity of Asbestos and 5 Talc." And this study used concentration levels of talc, at one, five, 10, 15, 7 20 micrograms per centimeter squared, correct? 4 Correct? 4 A. Yes. 5 A. Yes. 6 MR. SMITH: Okay. That's 7 A. Yes. 7 MR. SMITH: Okay. That's 8 Correct? 9 A. Yes. 9 A. Yes. 10 MR. SMITH: Okay. That's 11 Exhibit 37. 12 BY MR. SMITH: 12 general. I'm not talking about also litigation. I'm not talking about any particular litigation. 14 discussed, progress reports to the IMA during the course of this study; is that correct? 16 A. After a year, yes. We 17 A. After a year, yes. We 18 didn't provide them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to the other materials.  Q. And they sponsored the 20 MR. FROST: Objection.  A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation issues?  A. To my knowledge, these institutions were not involved in litigation issues?  A. To my knowledge, these institutions were not involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions on the proposals to industry involve	14	don't want to work with something that's	14	unusual to submit proposal to industry
that with time, we didn't look at the higher concentration of asbestos.  19 Q. I want to attach this as 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for 23 identification as Exhibit 4 Mossman-37.)  24 Mossman-37.)  25 Page 359  26 Page 359  27 Page 359  28 Page 361  29 Page 361  20 Q. Sure. It is not unusual to submit proposals to industry involved in regulatory and/or litigation issues? 29 MR. FROST: Objection. 20 BY MR. SMITH:  21 Page 359  22 Page 361  23 Page 361  24 Page 361  25 Page 361  26 Page 361  27 Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues? 28 Page 361  29 Page 361  20 Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues? 29 Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Talc." And this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and this study used concentration levels of falc, at one, five, 10, 15, and 10 proposals to industry involved in litigation in 2005. All this work was done prior to litigation in 2005. All this work was done prior to litigation in 2005. All this work was done prior to litigation in 2005. All this work was done prior to litigation in 2005. All this work was done prior to litigation in 2005. All this work was done prior to litigation	15	going to kill all the cells, so you can't		
higher concentration of asbestos.  19 Q. I want to attach this as 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for identification as Exhibit Mossman-37.)  24 Mossman-37.)  25 Page 359  26 Page 359  27 Page 361  28 Page 361  29 Page 361  20 Page 361  20 Page 361  21 By MR. SMITH:  20 Page 361  22 Page 361  23 WR. FROST: Objection.  24 By MR. SMITH:  25 Q. Here we are, Shukla, 26 "Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Determine Pathogenicity of Asbestos and Levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  20 MR. SMITH: Okay. That's  21 Exhibit 37.  22 Wind to attach this as 19 WR. SMITH:  23 Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  24 Correct?  25 Correct?  26 Correct?  27 Correct?  28 Correct?  29 A. Yes.  20 MR. SMITH: Okay. That's  20 micrograms per centimeter squared, correct?  20 MR. SMITH: Okay. That's  21 Exhibit 37.  22 Exhibit 37.  23 MR. FROST: Objection.  24 By MR. SMITH:  25 D. Is that unusual to submit proposals to industry involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  26 Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about about any particular litigation.  27 A. After a year, yes. We didn't provide them with progress reports to the IMA during the course of this study; is that correct?  28 Correct?  29 A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to the other materials.  29 Q. And they sponsored the unusual in toxicology to submit unusual in toxicology to submit	16	go higher. And in fact, that's a reason		
19 Q. I want to attach this as 20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for 23 identification as Exhibit 24 Mossman-37.)  Page 359  1 BY MR. SMITH: 2 Q. Here we are, Shukla, 3 "Appropriate Concentration Levels to 4 Determine Pathogenicity of Asbestos and 5 Talc." And this study used concentration 6 levels of talc, at one, five, 10, 15, 7 20 micrograms per centimeter squared, 8 correct? 9 A. Yes. 10 MR. SMITH: Okay. That's 11 Exhibit 37. 12 BY MR. SMITH: Okay. That's 13 Q. Okay. You provided, as we 14 discussed, progress reports to the IMA during the course of this study; is that correct? 16 A. After a year, yes. We 17 data didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to the other materials. 20 Identification as Exhibit 22 submit proposals to industry involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about apparticular litigation.  A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about apparticular litigation.  A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved in the proposals to industry involved in the proposals to industry that might be involved in involved i	17			• • • •
20 Exhibit 27 so I won't forget this. 21 Because I could. 22 (Document marked for identification as Exhibit 23 identification as Exhibit 24 Mossman-37.)  24 Page 359  Page 359  Page 361  Page 359  Page 361  Page 361  Page 361  Q. Is that unusual to submit proposals to industry involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  MR. SMITH: 2 Q. Here we are, Shukla, 3 "Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Talc." And this study used concentration levels of talc, at one, five, 10, 15, 7 20 micrograms per centimeter squared, correct?  MR. SMITH: Okay. That's 10 MR. SMITH: Okay. That's 11 Exhibit 37.  BY MR. SMITH: 12 BY MR. SMITH: 12 BY MR. SMITH: 12 BY MR. SMITH: 12 BY MR. SMITH: 13 Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct? 16 Correct? 16 Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved in regulatory and/or litigation issues? MR. FROST: Objection. BY MR. FROST: Objection. BY MR. SMITH: 12 Developed in regulatory and/or litigation issues? MR. FROST: Objection. BY MR. FROST: Objection. Page and the proposals to industry involved in regulatory and/or litigation issues, is it? THE WITNESS: It is not unusual in toxicology to submit	18	higher concentration of asbestos.		
Because I could.  (Document marked for identification as Exhibit 23 identification as Exhibit 24 Mossman-37.)  Page 359  Page 359  BY MR. SMITH:  Q. Here we are, Shukla, 22 proposals to industry involved in regulatory and/or litigation issues?  BY MR. SMITH:  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in itigation in 2005. All this work was done prior to litigation ensuing in this country.  MR. SMITH: 6  A. Yes. 9  A. Yes. 10  MR. SMITH: Okay. That's 11  Exhibit 37. 11  BY MR. SMITH: 12  BY MR. SMITH: 12  BY MR. SMITH: 12  BY MR. SMITH: 12  BY MR. SMITH: 13  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about any particular litigation. A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country. Q. No, no, I'm just talking in general. I'm not talking about appearable terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it? MR. FROST: Objection. THE WITNESS: It is not unusual in toxicology to submit				
22 (Document marked for identification as Exhibit Mossman-37.)  Page 359  BY MR. SMITH:  Page 359  Page 361  BY MR. SMITH:  Page 359  Page 361  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation issues?  A. To my knowledge, these institutions were not involved in litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  MR. SMITH:  A. Yes.  MR. SMITH:  A. Yes.  MR. SMITH:  Dear 359  Page 361  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about any particular litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection.  A. Fine.  MR. FROST: Objection.  THE WITNESS: It is not unusual in toxicology to submit	20			
23 identification as Exhibit 24 Mossman-37.)  Page 359  Page 361  BY MR. SMITH:  Q. Here we are, Shukla, 3 "Appropriate Concentration Levels to 4 Determine Pathogenicity of Asbestos and 5 Talc." And this study used concentration 6 levels of talc, at one, five, 10, 15, 7 20 micrograms per centimeter squared, 8 correct? 9 A. Yes. 10 MR. SMITH: Okay. That's 11 Exhibit 37. 12 BY MR. SMITH: Okay. That's 13 Q. Okay. You provided, as we 14 discussed, progress reports to the IMA 15 during the course of this study; is that 16 correct? 17 A. After a year, yes. We 18 didn't provide them with progress 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 the other materials. 23 MR. FROST: Objection.  Page 361  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation in sucus.?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about aspecifically this case. I'm not talking about any particular litigation.  A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection.  THE WITNESS: It is not unusual in toxicology to submit				
Page 359  BY MR. SMITH:  Q. Here we are, Shukla, "Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct? A. Yes.  MR. SMITH:  MR. SMITH:  Deage 361  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  MR. SMITH: Okay. That's Exhibit 37.  BY MR. SMITH:  BY MR. SMITH:  BY MR. SMITH:  BY MR. SMITH:  A. Yes.  Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other adata didn't appear to be with regard to the other materials.  Q. And they sponsored the  Day MR. SMITH:  DAY MR. SMITH:  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues;  MR. FROST: Objection.  THE WITNESS: It is not unusual in toxicology to submit				
Page 359  BY MR. SMITH:  Q. Here we are, Shukla,  "Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Talc." And this study used concentration levels of talc, at one, five, 10, 15,  20 micrograms per centimeter squared, correct?  MR. SMITH: Okay. That's  Exhibit 37.  BY MR. SMITH:  Q. Is that unusual to submit proposals to industry that might be involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  MR. SMITH: Okay. That's  BY MR. SMITH:  A. After a year, yes We  didn't provide them with progress reports. I wrote them e-mails that the absets data was positive, but the other data didn't appear to be with regard to the other materials.  Q. And they sponsored the				
1 BY MR. SMITH: 2 Q. Here we are, Shukla, 3 "Appropriate Concentration Levels to 4 Determine Pathogenicity of Asbestos and 5 Talc." And this study used concentration 6 levels of talc, at one, five, 10, 15, 7 20 micrograms per centimeter squared, 8 correct? 9 A. Yes. 10 MR. SMITH: Okay. That's 11 Exhibit 37. 12 BY MR. SMITH: 13 Q. Okay. You provided, as we 14 discussed, progress reports to the IMA 15 during the course of this study; is that 16 correct? 17 A. After a year, yes. We 18 didn't provide them with progress 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 Unicrograms per centimeter squared, correct? 23 Q. And they sponsored the 24 discussed, progress reports to the IMA didn't appear to be with regard to 25 Unicrograms per centimeter squared, correct? 26 A. To my knowledge, these institutions were not involved in litigation is 2005. All this work was done prior to litigation ensuing in this country. 26 Q. No, no, I'm just talking in general. I'm not talking about aspecifically this case. I'm not talking about any particular litigation. 3 A. Fine. 4 Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues? 4 A. To my knowledge, these institutions were not involved in litigation isoues?  A. To my knowledge, these institutions were not involved in litigation isoues?  A. To my knowledge, these institutions were not involved in litigation isoues?  A. To my knowledge, these institutions were not involved in litigation isoues?  A. To my knowledge, these institutions were not involved in litigation isoues?  A. To my knowledge, these institutions were not involved in litigation isoues?  A. To my knowledge, these institutions were not involved in litigation sequences.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit it it gation isoues, is it?  MR. FROST: Objection.  THE WITNESS: It is not unusual in to	24	Mossman-37.)	24	BY MR. SMITH:
2 Q. Here we are, Shukla, 3 "Appropriate Concentration Levels to 4 Determine Pathogenicity of Asbestos and 5 Talc." And this study used concentration 6 levels of talc, at one, five, 10, 15, 7 20 micrograms per centimeter squared, 8 correct? 9 A. Yes. 10 MR. SMITH: Okay. That's 11 Exhibit 37. 12 BY MR. SMITH: 13 Q. Okay. You provided, as we 14 discussed, progress reports to the IMA 15 during the course of this study; is that 16 correct? 17 A. After a year, yes. We 18 didn't provide them with progress 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 Universelled the sinvolved in regulatory and/or litigation in ssues?  A. To my knowledge, these institutions were not involved in 11 issues?  A. To my knowledge, these institutions were not involved in 12 litigation in 2005. All this work was 13 done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in 12 general. I'm not talking about specifically this case. I'm not talking 13 about any particular litigation. 14 A. Fine. Q. I'm just talking in general 15 terms, it is not unusual to submit 18 proposals to industry involved that 19 may be involved in regulatory and/or 11 litigation in 2005. All this work was 12 done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in 12 general. I'm not talking 13 about any particular litigation. 14 discussed, progress reports to the IMA 15 during the course of this study; is that 15 cuntry.  Q. No, no, I'm just talking in 16 general. I'm not talking about 17 terms, it is not unusual to submit 18 proposals to industry involved that 19 may be involved in regulatory and/or 11 litigation issues, is it?  MR. FROST: Objection. 17 THE WITNESS: It is not 18 unusual in toxicology to submit		Page 359		Page 361
Q. Here we are, Shukla,  "Appropriate Concentration Levels to Determine Pathogenicity of Asbestos and Talc." And this study used concentration levels of talc, at one, five, 10, 15,  Correct?  MR. SMITH: Okay. That's  Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the coase data was positive, but the other data didn't appear to be with regard to Q. And they sponsored the  Determine Pathogenicity of Asbestos and involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in involved in regulatory and/or litigation issues?  A. To my knowledge, these institutions were not involved in involved in regulatory and/or litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about any particular litigation.  A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection.  THE WITNESS: It is not unusual in toxicology to submit	1	BY MR. SMITH:	1	O. Is that unusual to submit
3 "Appropriate Concentration Levels to 4 Determine Pathogenicity of Asbestos and 5 Talc." And this study used concentration 6 levels of talc, at one, five, 10, 15, 7 20 micrograms per centimeter squared, 8 correct? 9 A. Yes. 10 MR. SMITH: Okay. That's 11 Exhibit 37. 12 BY MR. SMITH: 13 Q. Okay. You provided, as we 14 discussed, progress reports to the IMA 15 during the course of this study; is that 16 correct? 17 A. After a year, yes. We 18 didn't provide them with progress 19 reports. I wrote them e-mails that the 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 Unive didn't provide them with progres to the other data didn't appear to be with regard to 20 And they sponsored the 21 data didn't appear to be with regard to 22 Unive didn't provide them with progres to the other materials. 23 Q. And they sponsored the 24 discussed, progress reports to the IMA the data didn't appear to be with regard to 24 data didn't appear to be with regard to 25 unive didn't provided in regulatory and/or litigation in success in the success institutions were not involved in institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  4 D. No, no, I'm just talking in general. I'm not talking about appearitically this case. I'm not talking about any particular litigation.  4 D. No, no, I'm just talking in general. I'm not talking about appearitically this case. I'm not talking about any particular litigation.  5 A. Fine.  9 Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  16 MR. FROST: Objection.  17 THE WITNESS: It is not unusual in toxicology to submit	2	Q. Here we are, Shukla,	2	`
Determine Pathogenicity of Asbestos and Talc." And this study used concentration levels of talc, at one, five, 10, 15,  Determine Pathogenicity of Asbestos and Talc." And this study used concentration levels of talc, at one, five, 10, 15,  Determine Pathogenicity of Asbestos and Talc." And this study used concentration levels of talc, at one, five, 10, 15,  Determine Pathogenicity of Asbestos and Talc." And this study used concentration  Evaluation 10, 15,  Determine Pathogenicity of Asbestos and Talc." And this study used concentration  A. Yes.  Determine Pathogenicity of Asbestos and Talc." And this study used concentration  A. Yes.  Determine Pathogenicity of Asbestos and Talc." And this study used concentration  A. Yes.  Determine Pathogenicity of Asbestos and Talc." And this study used concentration  A. Yes.  Determine Pathogenicity of Asbestos and Talc." And they sponsored the  A. To my knowledge, these institutions were not involved in reunivolved in litigation in 2005. All this work was done prior to litigation in 2005. All this work was done prior to litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about any particular litigation.  A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection.  THE WITNESS: It is not unusual in toxicology to submit	3		3	
levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's  BY MR. SMITH:  BY MR. SMITH:  Country.  Countr	4	Determine Pathogenicity of Asbestos and	۱ ,	
7 20 micrograms per centimeter squared, 8 correct? 9 A. Yes. 10 MR. SMITH: Okay. That's 11 general. I'm not talking about 12 BY MR. SMITH: 13 Q. Okay. You provided, as we 14 discussed, progress reports to the IMA 15 during the course of this study; is that 16 correct? 17 A. After a year, yes. We 18 didn't provide them with progress 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 the other materials. 22 Ilitigation in 2005. All this work was done prior to litigation ensuing in this country. 20 litigation in 2005. All this work was done prior to litigation ensuing in this country. 21 litigation in 2005. All this work was done prior to litigation ensuing in this country. 22 litigation in 2005. All this work was done prior to litigation ensuing in this country. 24 litigation in 2005. All this work was done prior to litigation ensuing in this country. 25 litigation ensuing in this country. 26 litigation in 2005. All this work was done prior to litigation ensuing in this country. 26 litigation ensuing in this country. 27 litigation ensuing in this country. 28 done prior to litigation ensuing in this country. 29 litigation in 2005. All this work was done prior to litigation ensuing in this country. 20 litigation in 2005. All this work was done prior to litigation ensuing in this country. 28 done prior to litigation ensuing in this country. 29 litigation in 2005. All this done prior to litigation ensuing in this country. 20 litigation in 2005. All this done prior to litigation ensuing in this country. 20 litigation in 2005. All this done prior to litigation ensuing in this country. 20 litigation in 2005. All this done prior to litigation ensuing in this country. 20 litigation in 2005. All this done prior to litigation in 200			4	issues?
8 done prior to litigation ensuing in this 9 A. Yes. 10 MR. SMITH: Okay. That's 11 Exhibit 37. 12 BY MR. SMITH: 13 Q. Okay. You provided, as we 14 discussed, progress reports to the IMA 15 during the course of this study; is that 16 correct? 17 A. After a year, yes. We 18 didn't provide them with progress 19 reports. I wrote them e-mails that the 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 the other materials. 23 Q. And they sponsored the	5	Talc." And this study used concentration		
9 A. Yes. 10 MR. SMITH: Okay. That's 11 Exhibit 37. 12 BY MR. SMITH: 13 Q. Okay. You provided, as we 14 discussed, progress reports to the IMA 15 during the course of this study; is that 16 correct? 17 A. After a year, yes. We 18 didn't provide them with progress 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 the other materials. 23 Q. No, no, I'm just talking in 20 And they sponsored the 20 country. 21 data didn't give talking in 21 data didn't appear to be with regard to 22 unusual in toxicology to submit		Talc." And this study used concentration	5	A. To my knowledge, these
MR. SMITH: Okay. That's  Exhibit 37.  BY MR. SMITH:  Okay. You provided, as we  discussed, progress reports to the IMA  during the course of this study; is that  A. After a year, yes. We  didn't provide them with progress  reports. I wrote them e-mails that the  abelian dian't appear to be with regard to  d. No, no, I'm just talking in  general. I'm not talking  about talc litigation. I'm not talking  about any particular litigation.  A. Fine.  Q. I'm just talking in general  terms, it is not unusual to submit  proposals to industry involved that  may be involved in regulatory and/or  litigation issues, is it?  MR. FROST: Objection.  THE WITNESS: It is not  unusual in toxicology to submit	6	Talc." And this study used concentration levels of talc, at one, five, 10, 15,	5 6	A. To my knowledge, these institutions were not involved in
Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to Q. And they sponsored the general to general. I'm not talking about specifically this case. I'm not talking about about talc litigation. I'm not talking about about alc litigation. I'm not talking about about alc litigation. I'm not talking about appeared.	6 7 8	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared,	5 6 7	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was
BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to Q. And they sponsored the specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine. Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection. THE WITNESS: It is not unusual in toxicology to submit	6 7 8 9	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?	5 6 7 8 9	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.
Q. Okay. You provided, as we discussed, progress reports to the IMA discussed, progress reports to the IMA 15 during the course of this study; is that correct? 16 Q. I'm just talking in general 17 A. After a year, yes. We 17 terms, it is not unusual to submit 18 didn't provide them with progress 18 proposals to industry involved that 19 reports. I wrote them e-mails that the 19 may be involved in regulatory and/or 19 data didn't appear to be with regard to 21 MR. FROST: Objection. 22 the other materials. 22 THE WITNESS: It is not unusual in toxicology to submit 18 unusual in toxicology to submit 19 un	6 7 8 9 10	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's	5 6 7 8 9 10	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in
discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection. THE WITNESS: It is not unusual in toxicology to submit	6 7 8 9 10 11	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37.	5 6 7 8 9 10 11	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about
during the course of this study; is that  correct?  A. After a year, yes. We  didn't provide them with progress  reports. I wrote them e-mails that the  asbestos data was positive, but the other  data didn't appear to be with regard to  the other materials.  Q. I'm just talking in general  terms, it is not unusual to submit  proposals to industry involved that  may be involved in regulatory and/or  litigation issues, is it?  MR. FROST: Objection.  THE WITNESS: It is not  unusual in toxicology to submit	6 7 8 9 10 11 12	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37. BY MR. SMITH:	5 6 7 8 9 10 11 12	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking
16 correct?  18 A. After a year, yes. We 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 the other materials. 23 Q. I'm just talking in general 25 the original terms, it is not unusual to submit 26 proposals to industry involved that 27 may be involved in regulatory and/or 28 litigation issues, is it? 29 MR. FROST: Objection. 21 THE WITNESS: It is not 22 unusual in toxicology to submit	6 7 8 9 10 11 12 13	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37. BY MR. SMITH: Q. Okay. You provided, as we	5 6 7 8 9 10 11 12 13	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking
A. After a year, yes. We 17 terms, it is not unusual to submit 18 didn't provide them with progress 19 reports. I wrote them e-mails that the 20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 the other materials. 23 Q. And they sponsored the 25 terms, it is not unusual to submit 26 proposals to industry involved that 27 may be involved in regulatory and/or 28 litigation issues, is it? 29 MR. FROST: Objection. 20 THE WITNESS: It is not 21 unusual in toxicology to submit	6 7 8 9 10 11 12 13 14	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA	5 6 7 8 9 10 11 12 13 14	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.
didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to the other materials.  Q. And they sponsored the proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection. THE WITNESS: It is not unusual in toxicology to submit	6 7 8 9 10 11 12 13 14 15	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that	5 6 7 8 9 10 11 12 13 14 15	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.
reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to the other materials.  Q. And they sponsored the  may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection.  THE WITNESS: It is not unusual in toxicology to submit	6 7 8 9 10 11 12 13 14 15	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37. BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?	5 6 7 8 9 10 11 12 13 14 15 16	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general
20 asbestos data was positive, but the other 21 data didn't appear to be with regard to 22 the other materials. 23 Q. And they sponsored the 20 litigation issues, is it? 21 MR. FROST: Objection. 22 THE WITNESS: It is not 23 unusual in toxicology to submit	6 7 8 9 10 11 12 13 14 15 16	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37. BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We	5 6 7 8 9 10 11 12 13 14 15 16 17	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit
data didn't appear to be with regard to the other materials.  Q. And they sponsored the  MR. FROST: Objection. THE WITNESS: It is not unusual in toxicology to submit	6 7 8 9 10 11 12 13 14 15 16 17	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that
the other materials.  22 THE WITNESS: It is not unusual in toxicology to submit	6 7 8 9 10 11 12 13 14 15 16 17 18	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the	5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or
Q. And they sponsored the 23 unusual in toxicology to submit	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?
5 1	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37. BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection.
study, correct, along with EURUTALC? 24 proposals to industry as that is	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to the other materials.	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection.  THE WITNESS: It is not
l l	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Talc." And this study used concentration levels of talc, at one, five, 10, 15, 20 micrograms per centimeter squared, correct?  A. Yes.  MR. SMITH: Okay. That's Exhibit 37.  BY MR. SMITH:  Q. Okay. You provided, as we discussed, progress reports to the IMA during the course of this study; is that correct?  A. After a year, yes. We didn't provide them with progress reports. I wrote them e-mails that the asbestos data was positive, but the other data didn't appear to be with regard to the other materials.  Q. And they sponsored the	5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. To my knowledge, these institutions were not involved in litigation in 2005. All this work was done prior to litigation ensuing in this country.  Q. No, no, I'm just talking in general. I'm not talking about specifically this case. I'm not talking about talc litigation. I'm not talking about any particular litigation.  A. Fine.  Q. I'm just talking in general terms, it is not unusual to submit proposals to industry involved that may be involved in regulatory and/or litigation issues, is it?  MR. FROST: Objection.  THE WITNESS: It is not unusual in toxicology to submit

```
Page 362
                                                                                           Page 364
                                                       1
                                                                  was unaware of their involvement.
 1
             where most toxicologists reside.
 2
                                                       2
         BY MR. SMITH:
                                                              BY MR. SMITH:
  3
                                                       3
             Q. And conflicts of interest,
                                                                  Q. Would you agree that the
  4
                                                       4
                                                              Shukla study showed that the
         as far as being expert witness,
  5
         disclosures are up to the specific
                                                       5
                                                              non-pathogenic minerals, glass beads, and
  6
        journal, correct?
                                                       6
                                                              fine titanium dioxide treatment to cells
  7
                                                       7
             A. Yes.
                                                              resulted in no gene changes, and
  8
                                                       8
             Q. Okay.
                                                              crocidolite asbestos caused the maximum
  9
                                                       9
                                                              number of gene changes followed by talc?
                  Yes.
             A.
10
                                                     10
                                                                  A. No, I couldn't say that
             Q. And what do you think the
11
         study shows regarding talc -- talc's
                                                     11
                                                              statistically. Based on the statistical
12
         carcinogenicity?
                                                     12
                                                              assays that were performed here, as well
13
                 MR. FROST: Objection.
                                                     13
                                                              as in the Hillegass paper, showed that
                 THE WITNESS: We weren't
14
                                                     14
                                                              the magnitude and the types of gene
15
             attempting to show changes with
                                                     15
                                                              changes were different with talc and
16
             talc carcinogenicity.
                                                     16
                                                              asbestos, but talc was comparable in
17
                 Let me emphasize that our
                                                     17
                                                              numbers and types of changes to glass
18
             intent in these studies and the
                                                              beads and titanium dioxide.
                                                     18
19
             focus was on asbestos, on
                                                      19
                                                                  Q. You told me that you did not
20
             crocidolite asbestos, what gene
                                                     20
                                                              study talc in the Hillegass study.
21
             changes it induced in primarily
                                                                     MR. FROST: Objection.
                                                     21
22
             mesothelial cells, as we didn't
                                                     22
                                                                     THE WITNESS: I didn't
             get any striking results in
23
                                                     23
                                                                  say --
24
             ovarian epithelial cells.
                                                              BY MR. SMITH:
                                                     24
                                     Page 363
                                                                                           Page 365
 1
                And talc was just one of
                                                       1
                                                                  Q. It wasn't tested, talc was
 2
            other materials that were used to
                                                       2
                                                             not tested in the Hillegass study.
 3
                                                       3
                                                                     MR. FROST: Objection.
            see whether our effects were
 4
            specific to a pathogenic mineral
                                                       4
                                                                     THE WITNESS: Talc is in the
 5
                                                       5
            type or induced by other materials
                                                                  data. I'm sorry.
 6
            as well. And so we used three
                                                       6
                                                             BY MR. SMITH:
 7
            different controls, including tale
                                                       7
                                                                  Q. I understand that, but you
 8
                                                       8
                                                             did not perform all of the tests that you
            in these studies.
 9
        BY MR. SMITH:
                                                       9
                                                             did for asbestos. You did not -- you did
                                                     10
10
            Q. You're saying talc was used
                                                             not -- the utilization of gene profiling
11
        as a control?
                                                     11
                                                             and proteomics to determine mineral
                                                     12
                                                             pathogenicity in a human mesothelial cell
12
            A. It turned out to be a
13
        control, yes. We used it as a control of
                                                     13
                                                             line. You did not do gene profiling and
                                                     14
14
        a mineral that was not associated with
                                                             proteomics on talc.
15
        the development of mesothelioma as was
                                                     15
                                                                  A. We did. And we had looked
16
        crocidolite asbestos.
                                                     16
                                                             at it -- we did it in the Shukla study,
17
            O. But at that time, it was
                                                     17
                                                             and we looked at the microarray data by
18
        associated with the possibility of
                                                     18
                                                             something called principle component
                                                     19
                                                             analysis in the Hillegass study and
19
        increasing the risk in causing ovarian
20
        cancer, according to IARC, correct?
                                                     20
                                                             showed that the changes with talc were
                MR. FROST: Objection.
21
                                                     21
                                                             different in the two different cell
22
                THE WITNESS: No. These
                                                     22
                                                              types, and they were different in
23
                                                     23
            studies were done in 2005. If
                                                             magnitude and types of gene changes from
24
            IARC was involved at that point, I
                                                     24
                                                             asbestos, and that's in the first figure
```

	Page 366		Page 368
1	in the Hillegass study.	1	dioxide treatment to cell resulted in no
2	Q. Oh, we'll we'll get to	2	gene changes, crocidolite asbestos caused
3	the Hillegass study in a minute.	3	the maximum number of gene changes
4	A. Okay.	4	followed by talc."
5	Q. Let's let's stick with	5	And you told me that that
6	Shukla. All right. I marked I marked	6	study, Shukla, did not state that.
7	the next well, I'm going to mark the	7	Why would Jeffrey Bond state
8	next exhibit as 38.	8	that in the overall design in this
9	(Document marked for	9	publication released to the public if
10	identification as Exhibit	10	you're saying the study doesn't reveal
11	Mossman-38.)	11	that in Shukla?
12	BY MR. SMITH:	12	MR. FROST: Objection.
13	Q. And this on the NCBI, which	13	THE WITNESS: Yeah. We
14	is the public access of studies, and it	14	looked at the statistics which are
15	says status public on September 19, 2011,	15	not referenced here. And I'm not
16	"Alterations in gene expression in human	16	sure why he would have put not
17	mesothelial cells, correlate with mineral	17	included the statistics.
18	pathogenicity, organisms, homo sapiens,"	18	But it's important to note
19	this is your study we are talking about,	19	that the statistical changes by
20	the Shukla, correct?	20	talc were not significantly
21	A. It is. Yes.	21	elevated as compared to the
22	Q. Okay. And this is just a	22	controls which were titanium
23	publication a public publication of	23	dioxide and glass beads.
24	this study, of the summary and overall	24	And that was certainly the
	Page 367		
	Page 307		Page 369
1		1	
1 2	design and contributors and citations.	1 2	case following up with even more
2	design and contributors and citations.  And I want to look at the overall design.	2	case following up with even more sophisticated assays in the
2	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.	2 3	case following up with even more sophisticated assays in the Hillegass paper.
2 3 4	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?	2 3 4	case following up with even more sophisticated assays in the Hillegass paper. BY MR. SMITH:
2 3 4 5	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of	2 3 4 5	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at
2 3 4	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our	2 3 4	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at
2 3 4 5 6 7	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of	2 3 4 5 6 7	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose
2 3 4 5 6	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our	2 3 4 5 6	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at
2 3 4 5 6 7 8	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.	2 3 4 5 6 7 8	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to
2 3 4 5 6 7 8	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the	2 3 4 5 6 7 8	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.
2 3 4 5 6 7 8 9	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the	2 3 4 5 6 7 8 9	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at tale, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.
2 3 4 5 6 7 8 9 10	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact	2 3 4 5 6 7 8 9 10 11	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong.
2 3 4 5 6 7 8 9 10 11 12	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University	2 3 4 5 6 7 8 9 10 11 12	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low
2 3 4 5 6 7 8 9 10 11 12 13	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and	2 3 4 5 6 7 8 9 10 11 12 13	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of talc.
2 3 4 5 6 7 8 9 10 11 12 13 14	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."	2 3 4 5 6 7 8 9 10 11 12 13 14	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at tale, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of tale. It certainly was dose dependent.
2 3 4 5 6 7 8 9 10 11 12 13 14	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."  Do you see that, in	2 3 4 5 6 7 8 9 10 11 12 13 14 15	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at tale, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of tale. It certainly was dose dependent. We found only one gene at the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."  Do you see that, in Burlington, Vermont?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of talc. It certainly was dose dependent. We found only one gene at the lower concentrations, and 30 at
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."  Do you see that, in Burlington, Vermont?  A. Yes.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of talc. It certainly was dose dependent. We found only one gene at the lower concentrations, and 30 at the highest.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."  Do you see that, in  Burlington, Vermont?  A. Yes.  Q. And it says, "Overall	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of talc. It certainly was dose dependent. We found only one gene at the lower concentrations, and 30 at the highest.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."  Do you see that, in  Burlington, Vermont?  A. Yes.  Q. And it says, "Overall design" it says, "Summary," and then	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of talc. It certainly was dose dependent. We found only one gene at the lower concentrations, and 30 at the highest.  BY MR. SMITH:  Q. Okay.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."  Do you see that, in  Burlington, Vermont?  A. Yes.  Q. And it says, "Overall design" it says, "Summary," and then it says, "Overall design."	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of talc. It certainly was dose dependent. We found only one gene at the lower concentrations, and 30 at the highest.  BY MR. SMITH:  Q. Okay.  A. When we took out the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."  Do you see that, in  Burlington, Vermont?  A. Yes.  Q. And it says, "Overall design" it says, "Summary," and then it says, "Overall design."  In the last sentence of	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of talc. It certainly was dose dependent. We found only one gene at the lower concentrations, and 30 at the highest.  BY MR. SMITH:  Q. Okay.  A. When we took out the experiment to 24 hours at low
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	design and contributors and citations.  And I want to look at the overall design.  But let me ask you first.  Who is Jeffrey Bond?  A. Jeffrey Bond is director of the biostatistics department within our cancer center at the University of Vermont. So he was the one who did the statistics on these studies.  Q. And if you look at the second page, he's listed as the contact name. It says, "Organization, University of Vermont; department, microbiology and molecular genetics."  Do you see that, in  Burlington, Vermont?  A. Yes.  Q. And it says, "Overall design" it says, "Summary," and then it says, "Overall design."  In the last sentence of overall design of this study, the Shukla	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	case following up with even more sophisticated assays in the Hillegass paper.  BY MR. SMITH:  Q. But you did not look at talc, the higher concentrations, at 24 hours to determine if it was dose dependent just like asbestos.  MR. FROST: Objection to form.  THE WITNESS: You are wrong. We looked at eight hours at a low and high concentration of talc. It certainly was dose dependent. We found only one gene at the lower concentrations, and 30 at the highest.  BY MR. SMITH:  Q. Okay.  A. When we took out the experiment to 24 hours at low concentrations of both materials, we saw

93 (Pages 366 to 369)

	Page 370		Page 372
1	not result in a higher number.	1	did cause an increase.
2	So we certainly did do	2	MR. SMITH: Again, I'm going
3	dose-response experiments.	3	to object as nonresponsiveness.
4	Q. Point me into the Shukla	4	BY MR. SMITH:
5	study where you tested talc at the higher	5	Q. My question is simple and
6	concentration on peritoneal mesothelial	6	it's easy and clean and neat.
7	cells at 24 hours.	7	Point me to where in the
8	MR. FROST: Objection.	8	paper at high the higher
9	THE WITNESS: I'm saying we	9	concentration, that you exposed talc to
10	didn't look at 24 hours	10	peritoneal mesothelial cells that you say
11	BY MR. SMITH:	11	line the fallopian tubes, ovaries and
12	Q. Thank you.	12	peritoneal cavity at 24 hours. Tell me
13	A because our cells were	13	where you did that.
14	dead.	14	MR. FROST: Objection.
15	Q. Where does that state there?	15	THE WITNESS: Let's go
16	Where is it stated?	16	back
17	A. Where? In the paper?	17	BY MR. SMITH:
18	Q. That the cells were dead.	18	Q. No, ma'am. I need an answer
19	A. All you have to do is look	19	to the question. Did tell me in the
20	at the asbestos results	20	paper. Show it to me.
21		21	Where did you expose at
22	Q. No, ma'am. I'm talking about for talc.	22	24 hours
23		23	A. Why
24	A. We we wouldn't have	24	Q. Ma'am, let me finish my
24	looked we wouldn't have looked at talc	21	Q. Maaiii, let ille fillisii iliy
	Page 371		
	rage 3/1		Page 373
1	without looking at asbestos. Our focus	1	Page 373 question. I'm just going to ask a
1 2		1 2	
	without looking at asbestos. Our focus		question. I'm just going to ask a
2	without looking at asbestos. Our focus was on asbestos. Why would I look at	2	question. I'm just going to ask a question.
2 3	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to	2 3	question. I'm just going to ask a question.  Where point me in the
2 3 4	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?	2 3 4	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal
2 3 4 5	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a	2 3 4 5	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.
2 3 4 5 6 7 8	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about	2 3 4 5 6	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to
2 3 4 5 6 7	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've	2 3 4 5 6 7	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.
2 3 4 5 6 7 8	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that	2 3 4 5 6 7 8	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.
2 3 4 5 6 7 8 9	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian	2 3 4 5 6 7 8	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did
2 3 4 5 6 7 8 9	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this	2 3 4 5 6 7 8 9	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at
2 3 4 5 6 7 8 9 10 11	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to	2 3 4 5 6 7 8 9 10	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher
2 3 4 5 6 7 8 9 10 11	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.	2 3 4 5 6 7 8 9 10 11	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells
2 3 4 5 6 7 8 9 10 11 12 13	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this:	2 3 4 5 6 7 8 9 10 11 12 13	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's
2 3 4 5 6 7 8 9 10 11 12 13 14	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this:  Did you test talc at the higher	2 3 4 5 6 7 8 9 10 11 12 13	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this:  Did you test talc at the higher concentration with peritoneal mesothelial	2 3 4 5 6 7 8 9 10 11 12 13 14 15	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this:  Did you test talc at the higher concentration with peritoneal mesothelial cells at 24 hours, yes or no?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.  BY MR. SMITH:  Q. But you don't know if they
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this: Did you test talc at the higher concentration with peritoneal mesothelial cells at 24 hours, yes or no?  MR. FROST: Objection.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.  BY MR. SMITH:  Q. But you don't know if they would have died from talc at 24 hours?  MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this: Did you test talc at the higher concentration with peritoneal mesothelial cells at 24 hours, yes or no?  MR. FROST: Objection.  THE WITNESS: We did not.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.  BY MR. SMITH:  Q. But you don't know if they would have died from talc at 24 hours?  MR. FROST: Objection.  THE WITNESS: It wouldn't
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this: Did you test talc at the higher concentration with peritoneal mesothelial cells at 24 hours, yes or no?  MR. FROST: Objection.  THE WITNESS: We did not. We looked at the low	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.  BY MR. SMITH:  Q. But you don't know if they would have died from talc at 24 hours?  MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this: Did you test talc at the higher concentration with peritoneal mesothelial cells at 24 hours, yes or no?  MR. FROST: Objection.  THE WITNESS: We did not.  We looked at the low concentrations of both asbestos	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.  BY MR. SMITH:  Q. But you don't know if they would have died from talc at 24 hours?  MR. FROST: Objection.  THE WITNESS: It wouldn't have made any difference.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this:  Did you test talc at the higher concentration with peritoneal mesothelial cells at 24 hours, yes or no?  MR. FROST: Objection.  THE WITNESS: We did not.  We looked at the low concentrations of both asbestos and talc at comparable	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.  BY MR. SMITH:  Q. But you don't know if they would have died from talc at 24 hours?  MR. FROST: Objection.  THE WITNESS: It wouldn't have made any difference.  BY MR. SMITH:  Q. Sure it would have, because
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	without looking at asbestos. Our focus was on asbestos. Why would I look at talc when I couldn't compare it to asbestos?  Q. Because I don't have a problem with you making assumptions about asbestos in this paper. The problem I've got is you making assumptions that that deal with ovarian issues and ovarian gene expression changes, and what this study says about exposure of talc to peritoneal mesothelial cells.  And my question is this: Did you test talc at the higher concentration with peritoneal mesothelial cells at 24 hours, yes or no?  MR. FROST: Objection.  THE WITNESS: We did not.  We looked at the low concentrations of both asbestos and talc at comparable concentrations and showed that	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	question. I'm just going to ask a question.  Where point me in the paper where you exposed peritoneal mesothelial cells to talc at the higher concentrations at 24 hours, point it to me.  MR. FROST: Objection.  THE WITNESS: We we did not look at asbestos or talc at 24 hours at the higher concentrations because the cells were dying from asbestos. That's why.  BY MR. SMITH:  Q. But you don't know if they would have died from talc at 24 hours?  MR. FROST: Objection.  THE WITNESS: It wouldn't have made any difference.  BY MR. SMITH:

	D 274		D 276
	Page 374		Page 376
1	peritoneal excuse me, peritoneal	1	beads.
2	mesothelial cells that line the ovary and	2	BY MR. SMITH:
3	fallopian tubes and peritoneal cavity,	3	Q. Well, hold on. Show me. If
4	whether there was a dose-dependent	4	you're going to if you're going to
5	reaction because you saw 30 genes changes	5	make general statements like that about
6	at eight hours. And if the gene	6	this study, I have charts. I can look at
7	expression would have gone up at 24, then	7	them. I can look at the 30 genes that
8	we could say there was a dose-dependent	8	were changed and altered at eight hours
9	reaction there?	9	at the higher concentrations of
10	MR. FROST: Objection.	10	peritoneal mesothelial cells by talc.
11	THE WITNESS: No. I want to	11	You're now making a
12	emphasize that we looked at two	12	statement that I don't see anywhere in
13	concentrations of talc and	13	this paper that titanium dioxide and
14	asbestos at eight hours and there	14	glass beads did had similar gene changes
15	was a dose-dependent change with	15	and acted in a similar way that tale did
16	asbestos that was of a huge	16	compared to mesothelial cells at this
17	magnitude.	17	concentration at these hours.
18	That was not the case with	18	And my question is, where is
19	talc. And the results were	19	that table?
20	essentially the same as we got	20	MR. FROST: Objection.
21	with the other control particles.	21	THE WITNESS: Of controlled
22	BY MR. SMITH:	22	gene changes? There weren't any
23	Q. Okay. Well, tell me show	23	significant gene changes.
24	me in this paper where I don't see the	24	BY MR. SMITH:
	Page 375		Page 377
1	Page 375 chart for all the genes all the genes	1	Page 377 Q. Thank you. Thank you.
2		1 2	
2	chart for all the genes all the genes		Q. Thank you. Thank you. And A. That is my point.
2 3 4	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were	2	Q. Thank you. Thank you. And
2 3 4 5	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.	2 3	Q. Thank you. Thank you. And A. That is my point.
2 3 4 5 6	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were	2 3 4	Q. Thank you. Thank you.  And A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay.
2 3 4 5	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the	2 3 4 5	Q. Thank you. Thank you.  And A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have
2 3 4 5 6 7 8	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to	2 3 4 5 6	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would
2 3 4 5 6 7 8 9	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the	2 3 4 5 6 7 8	Q. Thank you. Thank you.  And A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have
2 3 4 5 6 7 8	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal	2 3 4 5 6 7 8	Q. Thank you. Thank you.  And A. That is my point. Q. Okay. And let's look at Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile
2 3 4 5 6 7 8 9 10	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium	2 3 4 5 6 7 8 9 10	Q. Thank you. Thank you.  And A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies.
2 3 4 5 6 7 8 9 10 11	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show	2 3 4 5 6 7 8 9 10 11 12	Q. Thank you. Thank you.  And A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is
2 3 4 5 6 7 8 9 10 11 12 13	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium	2 3 4 5 6 7 8 9 10 11 12 13	Q. Thank you. Thank you.  And A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?
2 3 4 5 6 7 8 9 10 11 12 13	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher	2 3 4 5 6 7 8 9 10 11 12 13	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic? MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations	2 3 4 5 6 7 8 9 10 11 12 13 14 15	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection. THE WITNESS: I think we
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection.  THE WITNESS: I think we went through this previously. But
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.  THE WITNESS: They didn't	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection.  THE WITNESS: I think we went through this previously. But if you talk about mesothelioma,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.  THE WITNESS: They didn't cause any increases in more than	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection.  THE WITNESS: I think we went through this previously. But if you talk about mesothelioma, there's a debate on whether the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.  THE WITNESS: They didn't cause any increases in more than twofold of and if you look at	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection.  THE WITNESS: I think we went through this previously. But if you talk about mesothelioma, there's a debate on whether the risk is zero or one or a low
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.  THE WITNESS: They didn't cause any increases in more than twofold of and if you look at the data with talc, even with the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection. THE WITNESS: I think we went through this previously. But if you talk about mesothelioma, there's a debate on whether the risk is zero or one or a low number.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.  THE WITNESS: They didn't cause any increases in more than twofold of and if you look at the data with talc, even with the 30, we're talking about looking at	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection.  THE WITNESS: I think we went through this previously. But if you talk about mesothelioma, there's a debate on whether the risk is zero or one or a low number.  BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.  THE WITNESS: They didn't cause any increases in more than twofold of and if you look at the data with talc, even with the 30, we're talking about looking at thousands of genes. That number	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection.  THE WITNESS: I think we went through this previously. But if you talk about mesothelioma, there's a debate on whether the risk is zero or one or a low number.  BY MR. SMITH: Q. Does IARC and the National
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.  THE WITNESS: They didn't cause any increases in more than twofold of and if you look at the data with talc, even with the 30, we're talking about looking at thousands of genes. That number statistically is as low as the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection.  THE WITNESS: I think we went through this previously. But if you talk about mesothelioma, there's a debate on whether the risk is zero or one or a low number.  BY MR. SMITH: Q. Does IARC and the National Toxicology Program consider all types of
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	chart for all the genes all the genes altered by the exposure to titanium dioxide and glass beads.  A. They were Q. I see a chart for all the genes altered by crocidolite asbestos to peritoneal mesothelial cells. I see the table of non-fibrous talc to peritoneal mesothelial cells and 30 genes change.  I need where is show me where the chart is that titanium dioxide and glass beads changed the comparable amount of genes that talc compared to mesothelial cells at higher concentrations  MR. FROST: Objection.  THE WITNESS: They didn't cause any increases in more than twofold of and if you look at the data with talc, even with the 30, we're talking about looking at thousands of genes. That number	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. Thank you. Thank you.  And  A. That is my point. Q. Okay. And let's look at  Hillegass. A. Okay. Q. Number 35. You have chrysotile asbestos, which you would agree with me is carcinogenic, correct? A. I didn't use chrysotile asbestos in these studies. Q. My question to you, is chrysotile asbestos carcinogenic?  MR. FROST: Objection.  THE WITNESS: I think we went through this previously. But if you talk about mesothelioma, there's a debate on whether the risk is zero or one or a low number.  BY MR. SMITH: Q. Does IARC and the National

95 (Pages 374 to 377)

	200	1	T 200
	Page 378		Page 380
1	carcinogens?	1	Therefore, we just talked
2	MR. FROST: Objection.	2	about the concentration that you used in
3	THE WITNESS: And that's	3	Shukla of talc would be five micrograms
4	based on lung cancers and	4	per centimeter squared or a lower
5	mesothelioma. And yes, they do.	5	concentration than is used for chrysotile
6	BY MR. SMITH:	6	on this chart, correct?
7	Q. Okay. Here, seven	7	MR. FROST: Objection.
8	micrograms per centimeter squared, do you	8	THE WITNESS: Yeah. I'm not
9	see that, Doctor? Of chrysotile. This	9	sure what you're getting at here.
10	is on your Table 3 of another study,	10	BY MR. SMITH:
11	correct?	11	Q. Well
12	A. Okay. You are going to have	12	A. Let me just double-check
13	to tell me what page that's on.	13	what you're saying, because I'm not sure
14	Q. It's 18 of 18.	14	it makes sense.
15	A. Okay. Okay. This is a	15	Q. We've been through this in
16	summary of work done by others in	16	Brower.
17	comparison to our work.	17	A. That's what I'm reiterating.
18	Q. Okay. And in the Shukla	18	It didn't make sense either then. Okay.
19	study the higher concentration is	19	Q. Well, let's just agree on
20	75 micrometers squared per centimeter	20	fundamentals. I mean, it's pretty easy.
21	squared would be five micrograms per	21	The higher concentration of five 75
22	centimeter squared, correct?	22	micrometers per centimeter squared that
23	A. Yes.	23	you used in Shukla for talc equals five
24	Q. Okay. So the concentration	24	micrograms per centimeter squared,
	` ` `		
	Page 379		D 201
	rage 375		Page 381
1		1	correct?
1 2	that you used of talc in Shukla is lower than the concentration here of	1 2	
	that you used of talc in Shukla is lower than the concentration here of		correct?
2	that you used of talc in Shukla is lower	2	correct?  A. In talc, the concentration
2	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of	2	correct?  A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah
2 3 4	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per	2 3 4	correct?  A. In talc, the concentration of five micrograms per centimeter squared
2 3 4 5	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four	2 3 4 5	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.
2 3 4 5 6	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes.	2 3 4 5 6	correct?  A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per
2 3 4 5 6 7	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?	2 3 4 5 6 7	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.
2 3 4 5 6 7 8	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes.  Q. And at eight hours in talc at a lower concentration, how many genes	2 3 4 5 6 7 8	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.
2 3 4 5 6 7 8	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes.  Q. And at eight hours in talc	2 3 4 5 6 7 8	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking
2 3 4 5 6 7 8 9	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes.  Q. And at eight hours in talc at a lower concentration, how many genes were upregulated?	2 3 4 5 6 7 8 9	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for
2 3 4 5 6 7 8 9 10	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies?	2 3 4 5 6 7 8 9 10 11	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is
2 3 4 5 6 7 8 9 10 11 12	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes.  Q. And at eight hours in talc at a lower concentration, how many genes were upregulated?  A. In our studies?  Q. Yes.	2 3 4 5 6 7 8 9 10 11 12	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two
2 3 4 5 6 7 8 9 10 11 12	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes.  Q. And at eight hours in talc at a lower concentration, how many genes were upregulated?  A. In our studies?  Q. Yes.  A. One gene was the ATF3	2 3 4 5 6 7 8 9 10 11 12 13	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher
2 3 4 5 6 7 8 9 10 11 12 13	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am	2 3 4 5 6 7 8 9 10 11 12 13 14	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and
2 3 4 5 6 7 8 9 10 11 12 13 14	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am A at the lowest concentration.	2 3 4 5 6 7 8 9 10 11 12 13 14 15	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and eight excuse me at four hours, how
2 3 4 5 6 7 8 9 10 11 12 13 14 15	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am A at the lowest	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am A at the lowest concentration. Q. Ma'am, I'm talking about I'm talking about I'm talking about	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and eight excuse me at four hours, how many genes were altered for chrysotile?  MR. FROST: Objection to
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am A at the lowest concentration. Q. Ma'am, I'm talking about I'm talking about I'm talking about the concentration used at the higher	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and eight excuse me at four hours, how many genes were altered for chrysotile?  MR. FROST: Objection to form.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am A at the lowest concentration. Q. Ma'am, I'm talking about I'm talking about I'm talking about the concentration used at the higher concentration in your study equals five	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and eight excuse me at four hours, how many genes were altered for chrysotile?  MR. FROST: Objection to form.  THE WITNESS: Eight. But
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am A at the lowest concentration. Q. Ma'am, I'm talking about I'm talking about I'm talking about the concentration used at the higher concentration in your study equals five micrograms per centimeter squared. The	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and eight excuse me at four hours, how many genes were altered for chrysotile?  MR. FROST: Objection to form.  THE WITNESS: Eight. But let me emphasize.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am A at the lowest concentration. Q. Ma'am, I'm talking about I'm talking about the concentration used at the higher concentration in your study equals five micrograms per centimeter squared. The chrysotile that's on this table is seven	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and eight excuse me at four hours, how many genes were altered for chrysotile?  MR. FROST: Objection to form.  THE WITNESS: Eight. But let me emphasize. BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	that you used of talc in Shukla is lower than the concentration here of chrysotile, seven micrograms per centimeter squared. And the results of the study as far as genes altered at four hours were eight by chrysotile, correct?  A. Yes. Q. And at eight hours in talc at a lower concentration, how many genes were upregulated? A. In our studies? Q. Yes. A. One gene was the ATF3 Q. Ma'am A at the lowest concentration. Q. Ma'am, I'm talking about I'm talking about I'm talking about the concentration used at the higher concentration in your study equals five micrograms per centimeter squared. The	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. In talc, the concentration of five micrograms per centimeter squared with talc equaled I'm sorry, yeah equals 81 surface area. Okay.  Q. So five micrograms per centimeter squared.  A. Yes.  Q. Okay. So we're looking this study that you cite in Hillegass for chrysotile that IARC and NTP say is carcinogenic to humans, uses two micrograms per centimeter squared higher concentration than you used for talc at the higher concentration in Shukla, and eight excuse me at four hours, how many genes were altered for chrysotile?  MR. FROST: Objection to form.  THE WITNESS: Eight. But let me emphasize.

96 (Pages 378 to 381)

	Page 382		Page 384
1	many genes were upregulated by talc at a	1	A. No one has used fallopian
2	lower concentration at eight hours? 30,	2	normal epithelial cells in any gene
3	correct?	3	profiling assay. We used the most normal
4	A. Right. So are you	4	cell type that we could get. And that
5	implicating that the results here with a	5	was the ovarian epithelial cell line from
6	completely different cell type are	6	Dr. Auersperg.
7	relevant to what I did in human	7	Q. You used immortalized cell
8	mesothelial cells or ovarian epithelial	8	in your Shukla study?
9	cells?	9	A. I used contact-inhibited
10	Q. Ma'am, you're trying to	10	immortalized cells, yes.
11	extrapolate all your work in asbestos to	11	Q. Okay. And is it appropriate
12	ovarian cancer and what talc's effect on	12	to use immortalized cells in in vitro
13	cells that have to do with ovarian	13	studies to study study cellular
14	cancer.	14	reactions?
15	A. I'm sorry, sir	15	A. It depends on what you're
16	MR. FROST: Objection.	16	trying to say. If you recall, our
17	THE WITNESS: but we have	17	emphasis here was to determine in cell
18	not discussed ovarian epithelial	18	lines that are relevant to humans, that
19	cells, because I got no changes	19	is human cell lines, whether significant
20	with talc in ovarian epithelial	20	gene changes were observed with
21	cells.	21	pathogenic mineral findings that were not
22	BY MR. SMITH:	22	observed with nonpathogenic mineral
23	Q. Where do the large majority	23	fibers.
24	of the ovarian cancers that we discussed	24	We weren't attempting to do
	Page 383		Page 385
1			
	originate. And that is the serous type.	1	transformation. We were attempting to
	originate. And that is the serous type.  Nearly 90 percent of the epithelial	1 2	transformation. We were attempting to look and see whether minerals at a
2	Nearly 90 percent of the epithelial	1	look and see whether minerals at a
	Nearly 90 percent of the epithelial ovarian cancers in the United States, do	2	look and see whether minerals at a variety of different comparable surface
2 3 4	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the	2 3	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced
2	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the	2 3 4	look and see whether minerals at a variety of different comparable surface
2 3 4 5	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the	2 3 4 5	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.
2 3 4 5 6 7	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?	2 3 4 5 6	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.
2 3 4 5 6	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.	2 3 4 5 6 7	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.
2 3 4 5 6 7 8	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought	2 3 4 5 6 7 8	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your
2 3 4 5 6 7 8 9	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't	2 3 4 5 6 7 8	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?
2 3 4 5 6 7 8 9	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the	2 3 4 5 6 7 8 9	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's
2 3 4 5 6 7 8 9 10	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no	2 3 4 5 6 7 8 9 10	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell
2 3 4 5 6 7 8 9 10 11 12	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.	2 3 4 5 6 7 8 9 10 11 12	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.
2 3 4 5 6 7 8 9 10 11 12 13	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data
2 3 4 5 6 7 8 9 10 11 12 13	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results	2 3 4 5 6 7 8 9 10 11 12 13 14	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go
2 3 4 5 6 7 8 9 10 11 12 13 14 15	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results have no bearing on that.	2 3 4 5 6 7 8 9 10 11 12 13 14 15	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go extremely high to get a toxic amount.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results have no bearing on that.  MR. FROST: Objection.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go extremely high to get a toxic amount.  And I would use inert as did IARC
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results have no bearing on that.  MR. FROST: Objection.  THE WITNESS: Well, you	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go extremely high to get a toxic amount. And I would use inert as did IARC repeatedly.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results have no bearing on that.  MR. FROST: Objection.  THE WITNESS: Well, you would like to think so. But the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go extremely high to get a toxic amount. And I would use inert as did IARC repeatedly.  Q. So you're saying you're
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results have no bearing on that.  MR. FROST: Objection.  THE WITNESS: Well, you would like to think so. But the fact remains that we got no	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go extremely high to get a toxic amount. And I would use inert as did IARC repeatedly.  Q. So you're saying you're saying that talc wait. Did you use
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results have no bearing on that.  MR. FROST: Objection.  THE WITNESS: Well, you would like to think so. But the fact remains that we got no changes with talc in ovarian	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go extremely high to get a toxic amount. And I would use inert as did IARC repeatedly.  Q. So you're saying you're saying that talc wait. Did you use cosmetic-grade talc or industrial grade
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results have no bearing on that.  MR. FROST: Objection.  THE WITNESS: Well, you would like to think so. But the fact remains that we got no changes with talc in ovarian epithelial cells.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go extremely high to get a toxic amount. And I would use inert as did IARC repeatedly.  Q. So you're saying you're saying that talc wait. Did you use cosmetic-grade talc or industrial grade talc for Shukla?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Nearly 90 percent of the epithelial ovarian cancers in the United States, do they originate in the surface of the epithelium of the surface area of the ovary or in the fallopian tubes, ma'am?  MR. FROST: Objection.  THE WITNESS: So we don't know. The majority are thought nowadays to originate in the fallopian tubes. That has no bearing upon our results at all.  BY MR. SMITH:  Q. I totally agree your results have no bearing on that.  MR. FROST: Objection.  THE WITNESS: Well, you would like to think so. But the fact remains that we got no changes with talc in ovarian epithelial cells.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	look and see whether minerals at a variety of different comparable surface areas and weight concentrations induced the same responses, and they don't.  Talc is inert as is glass beads and titanium dioxide.  Q. Inert. What is your definition of inert?  A. The same as it it's uncharged. It's inert in terms of cell reactions.  Look at the toxicity data for talc, for example. You have to go extremely high to get a toxic amount. And I would use inert as did IARC repeatedly.  Q. So you're saying you're saying that talc wait. Did you use cosmetic-grade talc or industrial grade talc for Shukla?  MR. FROST: Objection.

97 (Pages 382 to 385)

	Page 386		Page 388
1	think we know the answer.	1	is the chart in the study that shows me
2	BY MR. SMITH:	2	that titanium dioxide and glass beads
3	Q. Okay. You're saying that	3	altered 30 genes at eight hours at
4	talc is inert when at 75 micrometers	4	75 micrometers squared per centimeter
5	squared per centimeter squared at eight	5	squared in peritoneal mesothelial cells?
6	hours, it showed 30 alterations of gene	6	Show me the chart.
7	expressions?	7	MR. FROST: Objection.
8	A. Let's look at our ratio of	8	THE WITNESS: They didn't
9	30 over 3,000 compared to 1 over 3,000.	9	alter any genes that were elevated
10	And the 30	10	above two to three, and the 30
11	Q. What what comparison are	11	that were elevated by talc, which
12	you making that from?	12	were not seen at a low
13	MR. FROST: Objection.	13	concentration, were statistically
14	THE WITNESS: I'm talking	14	of the same magnitude as what was
15	about the inert materials that I	15	seen with glass beads and titanium
16	used. The glass beads	16	dioxide.
17	BY MR. SMITH:	17	And that is expanded upon in
18	Q. Where is that where is	18	the Hillegass paper.
19	again I'm going to go back to it.	19	BY MR. SMITH:
20	If you're going to say,	20	Q. We'll get to that.
21	because it's not written in this study	21	A. Okay.
22	anywhere what you just said.	22	(Document marked for
23	What what you just said,	23	identification as Exhibit
24	that tale is inert just like glass beads	24	Mossman-39.)
	Page 387		Page 389
1	and just like titanium dioxide	1	BY MR. SMITH:
2	A. Yes.	2	Q. This is Table 6. This is
3	Q and does and caused a	3	here in your report. Do you recall that?
4	similar number of gene expression changes	4	A D: -1-4
	. 1 . 1 . 1 . 1 . 1 . 1 . 1		A. Right.
5	as talc so they acted the same, which now	5	Q. Okay. I see talc. I see
6	I can say they are all inert, even though	6	•
	I can say they are all inert, even though they changed, altered 30 genes.	6 7	Q. Okay. I see talc. I see asbestos A. Yeah.
6 7 8	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.	6 7 8	<ul><li>Q. Okay. I see talc. I see</li><li>asbestos</li><li>A. Yeah.</li><li>Q I see gene changes right</li></ul>
6 7 8 9	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart	6 7 8 9	<ul> <li>Q. Okay. I see talc. I see</li> <li>asbestos</li> <li>A. Yeah.</li> <li>Q I see gene changes right</li> <li>here at the higher concentrations. 236</li> </ul>
6 7 8 9 10	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what,	6 7 8 9 10	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos,
6 7 8 9 10 11	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant. Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this	6 7 8 9 10 11	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct?
6 7 8 9 10 11 12	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what,  Dr. Mossman is right, I can look at this chart over here, it shows gene expression	6 7 8 9 10 11 12	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct.
6 7 8 9 10 11 12 13	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what,  Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go	6 7 8 9 10 11 12 13	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that
6 7 8 9 10 11 12 13	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what,  Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and	6 7 8 9 10 11 12 13 14	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying
6 7 8 9 10 11 12 13 14	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted	6 7 8 9 10 11 12 13 14 15	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct?
6 7 8 9 10 11 12 13 14 15 16	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?	6 7 8 9 10 11 12 13 14 15 16	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc
6 7 8 9 10 11 12 13 14 15 16 17	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?  MR. FROST: Objection.	6 7 8 9 10 11 12 13 14 15 16 17	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc and asbestos are not different
6 7 8 9 10 11 12 13 14 15 16 17	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?  MR. FROST: Objection.  THE WITNESS: Let's look at	6 7 8 9 10 11 12 13 14 15 16 17	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc and asbestos are not different carcinogens.
6 7 8 9 10 11 12 13 14 15 16 17 18	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?  MR. FROST: Objection.  THE WITNESS: Let's look at the fraction of gene changes, and	6 7 8 9 10 11 12 13 14 15 16 17 18	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc and asbestos are not different carcinogens. Q. In general. Different
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?  MR. FROST: Objection.  THE WITNESS: Let's look at the fraction of gene changes, and we were looking at thousands of	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc and asbestos are not different carcinogens. Q. In general. Different carcinogens can be of different potency,
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant. Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?  MR. FROST: Objection.  THE WITNESS: Let's look at the fraction of gene changes, and we were looking at thousands of gene changes.	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc and asbestos are not different carcinogens. Q. In general. Different carcinogens can be of different potency, correct, but they are still carcinogens?
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?  MR. FROST: Objection.  THE WITNESS: Let's look at the fraction of gene changes, and we were looking at thousands of gene changes.  So you put 30	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc and asbestos are not different carcinogens. Q. In general. Different carcinogens can be of different potency, correct, but they are still carcinogens? MR. FROST: Objection.
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?  MR. FROST: Objection.  THE WITNESS: Let's look at the fraction of gene changes, and we were looking at thousands of gene changes.  So you put 30 BY MR. SMITH:	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc and asbestos are not different carcinogens. Q. In general. Different carcinogens can be of different potency, correct, but they are still carcinogens? MR. FROST: Objection. THE WITNESS: Yeah, I mean
6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	I can say they are all inert, even though they changed, altered 30 genes.  A. That it's insignificant.  Q. Show me, show me the chart of where I can go, you know what, Dr. Mossman is right, I can look at this chart over here, it shows gene expression changes, 30 of them. And then I can go over here and look at glass beads and titanium dioxide, and go, wow, they acted the same. Where is that?  MR. FROST: Objection.  THE WITNESS: Let's look at the fraction of gene changes, and we were looking at thousands of gene changes.  So you put 30	6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Q. Okay. I see talc. I see asbestos A. Yeah. Q I see gene changes right here at the higher concentrations. 236 of the most potent form of asbestos, crocidolite asbestos, correct? A. That's correct. Q. And you told me that different carcinogens can have varying potencies, correct? A. Different carcinogens? Talc and asbestos are not different carcinogens. Q. In general. Different carcinogens can be of different potency, correct, but they are still carcinogens? MR. FROST: Objection.

98 (Pages 386 to 389)

	Page 390		Page 392
1	Everything should have a	1	titanium dioxide.
2	dose-response and a threshold, and	2	Q. Okay. So there is no chart.
3	it's going to be different with	3	In fact, there's a chart in
4	different materials.	4	your report that shows there are no genes
5	BY MR. SMITH:	5	altered by fine titanium dioxide at low
6	Q. All right. We'll get to	6	concentrations and glass beads at high
7	that in a minute in Brower, your	7	concentrations, and that tale at high
8	testimony.	8	concentrations altered 30 genes, right?
9	A. Okay.	9	A. Yes. But again, I emphasize
10	Q. All right. Hereafter, look	10	that we're if you put that back on
11	at that, 30 genes altered at that	11	there, we can talk about it.
12	should be	12	Q. Oh, I'm sorry.
13	A. That's switched around.	13	A. Okay. So we're looking
14	You're right.	14	again, the emphasize is on asbestos, and
15	Q. It should be that's	15	we're looking in mesothelial cells at low
16	wrong. It should be eight hours.	16	and high concentrations at 24 hours to
17	A. Yeah.	17	demonstrate a dose-response. We don't
18	Q. Okay. I'm looking right	18	at low and high concentrations, we get
19	here at fine titanium dioxide and glass	19	a a dose-response. The magnitude is
20	beads and low and I don't see a high	20	not of the same type. In fact, the
21	concentration. Why where is the high	21	changes in the genes, including going up
22	concentration to fine titanium dioxide?	22	and down, were not of the same type.
23	MR. FROST: Objection.	23	Q. Ma'am, I asked you earlier.
24	THE WITNESS: Okay. So if	24	You're the one that went beyond what's
	THE WITNESS. Okay. So II	24	Toute the one that went beyond what's
	Page 391		Page 393
1	we look at	1	in written down in this report and
2	BY MR. SMITH:	2	told me that talc at the high
3	Q. I'm just asking where is it	3	concentrations acted just inert just like
4	on this chart.	4	fine titanium dioxide and just like glass
5	A. Okay. At low	5	beads
6	concentrations, at 24 hours, fine	6	A. It
7	titanium dioxide was run, and the high	7	Q. And now my question to you
8	glass beads were run at eight and	8	is
9	24 hours.	9	A. Yes.
10	Q. Ma'am.	10	Q and you said they altered
11	A. Yeah.	11	the same amount of genes. And you
12	Q. Tell me how many genes are	12	said and I said where is the chart,
13	altered in this chart by glass beads at	13	and you kept answering your question.
14	high concentrations.	14	And I so I went and
15	A. None.	15	pulled the chart that you have in your
16	Q. Tell me how many genes are	16	report.
17	altered by fine titanium dioxide at high	17	A. Right.
18	concentrations.	18	Q. And we can look at how many
19	Was it done?	19	genes are altered by glass beads at the
20	MR. FROST: Objection.	20	high concentration, right?
21	BY MR. SMITH:	21	What does it say?
22	Q. I don't see it.	22	MR. FROST: Objection.
23	A. It was it was done at the	23	THE WITNESS: Yeah, when
24	low amount and not at the high amount for	24	when one presents microarray data,
24	low amount and not at the high amount for	24	when one presents microarray data

Page 394  1 you present significant gene changes. There's no data here for thousands of genes because we didn't see any. We're talking about bold increases.  8 BY MR. SMITH:  9 A. If's got to be two or greater  10 greater  11 Q. I agree.  12 A. So what I'm telling you is a that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  13 With tale at low, we see an in insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  12 So we see unique changes to asbestos. That's what we are focusing on.  12 A. SMITH: That's not my question, Doctor. I'm going to object to nomesponsiveness.  14 BY MR. SMITH:  25 Q. My question had to do  26 you're talking  27 and you said fars  28 BY MR. SMITH:  29 A. Okay. So  Q. And you said causes cellular responses. And my question to you is, show me. I can see where tale at high  20 the proposed and the seed of mineritals we're controls. And I as aid what is the definition of inert?  9 A. Okay. So  Q. And you said causes cellular responses. And my question to you is, show me. I can see where tale at high  20 the proposed and the seed of mineritals and the seed of mineritation at eight hours and in the proposed of the controls. And I as aid what is the definition of inert?  9 A. Okay. So  Q. And you said causes cellular responses. And my question to you is, show me. I can see where tale at high  21 the higher concentration at eight hours and the proposed of the controls and the proposed of the control of the should be added to the total number of geness that was borne out by one set of analyses called PCA analyses in the Hillegass.  Q. But you didn't do PCA analyses in the Hillegass.  Q. But you didn't do PCA analyses in the Hillegass.  A. We went through this before. Lef's look at Figure 1, and the tale data is graphed.  Q. Okay, All right. We'll go third the proposed of the analyses ca			1	
changes. There's no dafa here for thousands of genes because we didn't see any. We're talking about bold increases.  BY MR. SMITH:  Q. That's what I'm talking about.  A. It's got to be two or greater  Q. Tagree.  A. So what I'm telling you is that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  With tale at low, we see an insignificant amount compared to the materials we're looking, that does not go up like asbestos.  So we see unique changes to asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. My question had to do-you're talking and stated that tale was an inert substance and it did not reads a time the read and was an ire trubstance and it did not gas beads that were controls. And I said what is the definition of inert?  A. Okay, So Q. Dosy and the tale data is graphed.  BY MR. SMITH:  MR. FROST: Objection.  MR. FROST: Objection.  THE WITNESS: It's not on this chart.  MR. FROST: Objection.  THE WITNESS: It's not on this chart.  Description and the wore of the total number of genes that we looked at, which were in the thousands, the ratio of that unmber of genes that we looked at, which were in the thousands, the ratio of that unmber of genes that we looked at, which were in the thousands, the ratio of that unmber of genes that we looked at, which were in the thousands, the ratio of that unmber of genes that we looked at, which were in the thousands, the ratio of that unmber of genes that we looked at, which were in the thousands, the ratio of that unmber of genes that we looked at, which were in the thousands, the ratio of that unmber of genes that we looked at, which were in the thousands, the ratio of that unmber of genes means nothing.  A. That's correct. It's insignificant.  A. That's correct. It's		Page 394		Page 396
thousands of genes because we didn't see any. We're talking about bold increases.  BY MR. SMITH:  Q. That's what I'm talking about.  A. It's got to be two or greater —  Q. I agree.  A. So what I'm telling you is the with absetsos, we see low, 29, which goes up to fourfold higher, eight hours.  With tale at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  So we see unique changes to asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  BY MR. SMITH:  Q. My question had to do—you're talking — and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like itianium dioxide and glass beads that were controls. And I said what is the definition of inert?  A. Okay. So—Q. And you said causes cellular responses. And my question to you is, show me. I can see where tale at high—the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads of fine titanium dioxide and the regal as beads on fine titanium dioxide and the did not were glass beads of fine titanium dioxide and the glass beads of fine titanium			1	A. There are no genes that are
didn't see any. We're talking about bold increases.  BY MR. SMITH:  O. That's what I'm talking about.  A. It's got to be two or greater  O. Togree.  A. So what I'm telling you is that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  With talc at low, we see an insignificant amount compared to the one ratio with titanium doxide and glass beads what we are focusing on.  Page 395  BY MR. SMITH:  O. I agree.  A. So what I'm telling you is that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  With talc at low, we see an insignificant amount compared to the one ratio with titanium doxide and glass beads was insignificant.  BY MR. SMITH:  O. My question had to do  you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert?  A. Okay, So  O. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours.  A. That's he zero number of by it at the high concentrations at 24 hours at the higher concentration at 24 hours at eight hours?  A. 30, compared to the total number of genes that we looked at, which were in the thousands, the ratio of that compared to the one ratio with titanium dioxide and glass beads was insignificant.  BY MR. SMITH:  D. With talc at low, we see an insignificant amount compared to the one ratio with titanium dioxide and glass beads was insignificant.  BY MR. SMITH:  D. With talc at low, we see an insignificant.  A. That's hee zero number.  A. 30, compared to the total number of genes that we looked at, which were in the thousands, the ratio of that compared to the one ratio with titanium dioxide and goes beads was insignificant.  BY MR. SMITH:  D. With talc at low, we see an insorting of the total number of genes shad was bone out by dioxide allered and goes seed and also seed of			2	increased above twofold levels.
by MR. SMITH:  A Joy C. That's what I'm talking about.  A A It's got to be two or greater  Q I agree.  A So what I'm telling you is that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  With tale at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  Bow see unique changes to asbestos. That's what we are focusing on.  MR. SMITH:  A So Was goes un to fourfold higher, eight hours.  With tale at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  Bow see unique changes to asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q My question had to do you're talking and stated that tale was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and said what is the definition of inert?  A Okay, So Q And you said causes cellular responses, And my question to you is, show me. I can see where tale at high-the higher concentration at eight hours at eight hours.  A 30, compared to the total number of genes that we looked at, which were in the thousands, the ratio of that compared to the one ratio with titanium dioxide or glass beads was insignificant.  30 genes means nothing?  A. That's correct. It's insignificant. And that was borne out by one set of analyses called ANOVA in the Shukla paper and another set of analyses called ANOVA in the Shukla paper and another set of analyses called ANOVA in the Shukla paper and another set of analyses on tale in Hillegass.  Q. But you didn't do PCA analyses in the Hillegass.  A That's what we are focusing on.  It's in the data.  BY MR. SMITH:  Q. Okay, We'll get there.  A. We went through this before.  Let's look at Figure I, and the tale data is graphed.  Q. Vous, All right. We'll go through it.  A. Okay.  Q. You stated earlier in the depending on the shape, size -	3	thousands of genes because we	3	
6 BY MR. SMITH: 7 Q. That's what I'm talking 8 about. 9 A. It's got to be two or 9 greater 10 10 greater 11 11 Q. I agree. 12 A. So what I'm telling you is 13 that with asbestos, we see low, 29, which 14 goes up to fourfold higher, eight hours. 15 With tale at low, we see an insignificant amount compared to the one ratio with titanium doixide or glass beads was insignificant. 16 insignificant amount compared to the other materials we're looking, that does not go up like asbestos. 18 So we see unique changes to asbestos. That's what we are focusing on. 20 asbestos. That's what we are focusing on. 21 O. MR. SMITH: That's not my question, Doctor. I'm going to object to nomresponsiveness. 22 MR. SMITH: 2 Q. My question had to do you're talking and stated that tale was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert? 3 A. Okay. So Q. And you said ouses cellular responses. And my question to you is, show me. I can see where tale at high-the higher concentration at eight hours at latered 30 genes. Show me on this chart where glass beads or fine titanium dioxide and dioxide altered any. 4 MR. FROST: Objection. 5 With tale at low or we see an insignificant. And that was borne out by one set of analyses nothing.  9 A. Okay. So Q. And you said it's intert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert? 4 A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where tale at high-the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  4 MR. FROST: Objection. 5 WH. FROST: Objection. 6 Wh. FROST: Objection. 7 Wh. FROST: Objection. 7 Wh. FROST: Objection. 8 Wh. SMITH: 9 Q. Can you show it to me? 9 MR. FROST: Objection. 17 Wh. FROST: Objection. 18 Wh. SMITH: 19 Q. Can you show it to me? 19 MR.	4	didn't see any. We're talking	4	A. That's the zero number.
A. It's got to be two or greater	5	about bold increases.	5	Q. Does talc have a zero number
about.  A. It's got to be two or greater  Q. I agree.  A. So what I'm telling you is that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  With talc at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  So we see unique changes to asbestos. That's what we are focusing on.  Page 395  BY MR. SMITH:  Q. My question had to do you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert'?  A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where tale at high-the higher concentration at eight hours all altered 30 genes. Show me on this chart.  BY MR. SMITH:  MR. FROST: Objection.  BY MR. SMITH:  MR. FROST: Objection.  MR. FROST: Objection.  MR. FROST: Objection.  MR. FROST: Objection.  THE WITNESS: It's not on this chart.  MR. FROST: Objection.  THE WITNESS: It's not on this chart.  MR. FROST: Objection.  THE WITNESS: It's not on this chart.  A. Yes.  Q. Okay. And this study did	6	BY MR. SMITH:	6	by it at the high concentrations at 24
9 A. It's got to be two or greater — 10 greater — 10 G. I agree. 11 G. I agree. 12 A. So what I'm telling you is that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours. 14 goes up to fourfold higher, eight hours. 15 With talc at low, we see an insignificant amount compared to the onter materials we're looking, that does not go up like asbestos. 19 So we see unique changes to asbestos. That's what we are focusing on. 20 asbestos. That's what we are focusing on. 21 on. 22 MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness. 24 Department of the internal stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert? A. Okay. So — Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high—the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide and responses. Show me on this chart where glass beads or fine ittanium dioxide altered any. MR. FROST: Objection. THE WITNESS: It's not on this chart. BY MR. SMITH: 18 mintended from type and grade of talc and different types and different mines that they're mined from, right? A. Yes. 22 A. Yes. 23 BY MR. SMITH: 23 O. Okay. All this study did	7	Q. That's what I'm talking	7	hours at eight hours?
10   greater   2	8	about.	8	A. 30, compared to the total
1	9	A. It's got to be two or	9	number of genes that we looked at, which
A. So what I'm telling you is that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  With tale at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  So we see unique changes to asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. My question had to do—you're talking—and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert?  A. Chay. So—Q. And you said causes cellular responses. And my question to you is, show me. I can see where tale at high—the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?  MR. FROST: Objection.  THE WITNESS: It's not on this chart.  His mit dioxide or glass beads was insignificant.  30 genes means nothing?  A. That's correct. It's insignificant. And that was borne out by one set of analyses called ANOVA in the Shukla paper and another set of analyses called PCA analyses in the Hillegass.  Q. But you didn't do PCA analysis on tale in Hillegass?  MR. FROST: Objection to form.  11 It's in the data.  BY MR. SMITH:  Q. Okay. We'll get there.  A. We went through this before.  Let's look at Figure 1, and the tale data is graphed.  Q. Okay. All right. We'll go through it.  Q. Okay. All right. We'll go through it.  Q. Okay. All right. We'll go through it.  Q. Okay. Grap on the shape, size—shape, size—shape, size, and crystallinity; is that correct?  A. Yes.  Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and tale vary from type and grade of tale and different types and different mines that they're mined from, right?	10		10	were in the thousands, the ratio of that
that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  With talc at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  So we see unique changes to asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. My question had to do 2	11	Q. I agree.	11	compared to the one ratio with titanium
that with asbestos, we see low, 29, which goes up to fourfold higher, eight hours.  With talc at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  So we see unique changes to asbestos. That's what we are focusing on.  Page 395  BY MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. My question had to do you're talking and stated that talc was an inert substance and it did not recat with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert?  A. The WITNESS: Yes, we did.  Page 395  BY MR. SMITH:  Q. Okay. We'll get there.  A. We went through this before. Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through this before. Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through this before. Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through this before. Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through this before. Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through this before. Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through this before. Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through this before. Let's look at Figure 1, and the talc data is graphed.  Q. Okay. So 9 Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Okay. And that you admitted that shape, size, and crystallinity; is that correct?  A. Yes.  Q. And that you admitted that shape, size, and crystallinity of minerals such	12	A. So what I'm telling you is	12	dioxide or glass beads was insignificant.
goes up to fourfold higher, eight hours.  With tale at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos.  So we see unique changes to 20 asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. 30 genes means nothing?  A. That's correct. It's insignificant. And that was borne out by one set of analyses called ANOVA in the Shukla paper and another set of analyses called PCA analyses in the Hillegass.  Q. But you didn't do PCA analysis on talc in Hillegass?  MR. FROST: Objection to form.  Page 395  Page 397  I BY MR. SMITH:  Q. My question had to do 24 was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert?  A. Okay. So 9  A. Okay. So	13		13	
With talc at low, we see an insignificant amount compared to the other materials we're looking, that does not go up like asbestos. So we see unique changes to asbestos. That's what we are focusing on.   21	14		14	
16 insignificant amount compared to the other materials we're looking, that does 18 not go up like asbestos. So we see unique changes to 20 asbestos. That's what we are focusing on. 21 analysis on tale in Hillegass. 22 MR. SMITH: That's not my question, Doctor. I'm going to 23 deustion, Doctor. I'm going to 24 object to nonresponsiveness. 24 THE WITNESS: Yes, we did.  Page 395  BY MR. SMITH: 2 Page 395  BY MR. SMITH: 3 page 395  Page 397  I BY MR. SMITH: 2 Page 395  BY MR. SMITH: 3 page 395  Page 397  I BY MR. SMITH: 4 Page 395  BY MR. SMITH: 4 Page 395  Page 397  I It's in the data. BY MR. SMITH: 3 page 397  I It's in the data. BY MR. SMITH: 4 Page 397  A We went through this before. Let's look at Figure 1, and the tale data is graphed. Q. Okay. We'll get there. A. We went through this before. Let's look at Figure 1, and the tale data is graphed. Q. Okay. All right. We'll go through it. A. Okay. So Q. You stated earlier in the depot that minerals such as asbestos and talc react differently to human cells deponding on the shape, size — shape, size, and crystallinity; is that correct? A. Yes. Q. And that you admitted that shape, size, and crystallinity; of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right? A. Yes. Page 397	15		15	
other materials we're looking, that does not go up like asbestos.  So we see unique changes to asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. My question had to do you're talking and stated that tale was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I responses. And my question to forner?  A. Okay. So Q. Mand you said causes cellular responses. And my question to to inert?  A. Okay. So Q. Okay. All right. We'll go through it. as show me. I can see where talc at high-the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads frine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  1 It's in the data.  BY MR. SMITH:  2 Q. Okay. We'll get there.  A. We went through this before.  Let's look at Figure 1, and the talc data is graphed.  9 Q. Okay. All right. We'll go through it.  A. Okay. Oy ustated earlier in the depo that minerals such as asbestos and talc react differently to human cells depending on the shape, size, and crystallinity; is that correct?  A. Yes.  Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right?  A. Yes.  BY MR. SMITH:  2 One analyses called PCA analyses called PCA analyses to alled PCA analyses to called PCA analyses to called PCA analyses called PCA analyses to talled PCA analyses to talled PCA analyses to talle pack analyses to alley analyses to alley analyses to alley analyses called PCA analyses to analyses called PCA analyses to alley analyses called PCA analyses to alley analyses called PCA analyses to alley analyses to all the Hillegass?  MR. FROST: Objecti	16		16	
18	17		17	•
So we see unique changes to asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH: Q. My question had to do you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert? A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours dioxide altered any.  MR. FROST: Objection. BY MR. SMITH:  Q. Okay. We'll get there. A. Okay. Q. Okay. All right. We'll go through it. A. Okay. Q. You stated earlier in the depending on the shape, size shape, size, and crystallinity; is that correct? A. Yes. Q. Can you show it to me? MR. FROST: Objection. BY MR. SMITH:  MR. FROST: Objection.  THE WITNESS: It's not on this chart.  MR. SMITH:  20	18		18	<del>-</del>
asbestos. That's what we are focusing on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  Page 395  BY MR. SMITH:  Q. My question had to do you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert? A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours dioxide altered any.  MR. FROST: Objection. BY MR. SMITH:  Q. But you didn't do PCA analysis on talc in Hillegass?  MR. FROST: Objection to page 395  Page 397  It's in the data. BY MR. SMITH: Q. Okay. We'll get there. A. We went through this before. Let's look at Figure I, and the talc data is graphed. Q. Okay. All right. We'll go through it. A. Okay. Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection. BY MR. SMITH:  D. Okay. Me'll get there. A. We went through this before. Let's look at Figure I, and the talc data is graphed. Q. Okay. All right. We'll go through it. A. Okay. Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells altered any.  A. Yes. Q. And that you admitted that alc the page of talc and different types and different mines that they're mined from, right?  A. Yes.  A. Yes.  A. Yes.  A. Yes.  Q. Okay. And this study did		• •		· ·
on.  MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. My question had to doyou're talking and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert?  A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where tale at high the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  1 It's in the data.  Page 397  BY MR. SMITH:  Q. Okay. We'll get there.  A. We went through this before.  Let's look at Figure 1, and the tale data is graphed.  Q. Okay. All right. We'll go through it.  4 A. Okay.  Q. You stated earlier in the depo that minerals such as asbestos and tale react differently to human cells depending on the shape, size shape, size, and crystallinity; is that correct?  A. Yes.  Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and tale vary from type and grade of tale and different types and different mines that they're mined ffrom, right?  A. Yes.  BY MR. SMITH:  A. Yes.  Q. Okay. And this study did				
MR. SMITH: That's not my question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. My question had to do you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert?  A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  Page 395  Page 397  It's in the data.  BY MR. SMITH:  Q. Okay. We'll get there.  A. We went through this before.  Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through it.  A. Okay.  Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells depending on the shape, size shape, size, and crystallinity; is that correct?  A. Yes.  Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right?  A. Yes.  Q. Okay. And this study did		<del>-</del>	1	
question, Doctor. I'm going to object to nonresponsiveness.  Page 395  BY MR. SMITH:  Q. My question had to do 3 you're talking and stated that talc 4 was an inert substance and it did not 5 react with cells. And you said it's 6 inert just like titanium dioxide and 7 glass beads that were controls. And I 8 said what is the definition of inert? 9 A. Okay. So 10 Q. And you said causes cellular 11 responses. And my question to you is, 12 show me. I can see where talc at high 13 the higher concentration at eight hours 14 altered 30 genes. Show me on this chart 15 where glass beads or fine titanium 16 dioxide altered any. 17 MR. FROST: Objection. 18 BY MR. SMITH: 29 Q. Can you show it to me? 20 MR. FROST: Objection. 21 THE WITNESS: Yes, we did. 21 It's in the data. 22 BY MR. SMITH:  1 It's in the data. 24 BY MR. SMITH:  1 It's in the data. 25 We went through this before. 26 Let's look at Figure 1, and the talc data is graphed. 30 Q. Okay. All right. We'll go through it. 4 Q. You stated earlier in the depot that minerals such as asbestos and talc react differently to human cells depending on the shape, size shape, size, and crystallinity; is that correct? 31 A. Yes. 32 BY MR. SMITH: 32 A. Yes. 34 THE WITNESS: Yes, we did. 34 THE WITNESS: Yes, we did. 35 THE WITNESS: Yes, we did. 36 In THE WITNESS: Yes, we did. 36 In THE WITNESS: Yes, we did. 36 THE WITNESS: Yes, we did. 36 In THE WITNESS: Yes, we did. 37 It BY MR. SMITH: 38 It's in the data. 38 BY MR. SMITH: 4 A. We went through this before. 4 A. We went through this chart. 5 Let's look at Figure 1, and the talc data is graphed. 9 Q. Okay. All right. 4 A. We went through this op. 4 A. Okay. 9 Q. Okay. All right. 4 A. Okay. 9 Q. Okay. All right. 4 A. Ve'll get there. 4 A. We went through this chart. 5 Let's look at Figure 1, and the talc data is graphed. 9 Q. Okay. All right. 4 A. Okay. 9 Q. Okay. All right. 4 A. Okay. 9 A.			I	
Page 395  Page 395  BY MR. SMITH:  Q. My question had to do you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's glass beads that were controls. And I said what is the definition of inert? A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours the heigher concentration at eight hours dioxide altered any.  MR. FROST: Objection. BY MR. SMITH:  Page 395  BY MR. SMITH:  It's in the data. BY MR. SMITH: Q. Okay. We'll get there. A. We went through this before. Let's look at Figure 1, and the talc data is graphed. Q. Okay. All right. We'll go through it. A. Okay. Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells talc react differently to human cells size, and crystallinity; is that correct? A. Yes. Q. And that you admitted that Shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're minerals chart.  MR. FROST: Objection. THE WITNESS: It's not on this chart.  BY MR. SMITH:  BY MR. SMITH:  A. Yes. Q. Okay. And this study did			1	•
Page 395  BY MR. SMITH:  Q. My question had to do you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert? A. We went through this before. Let's look at Figure 1, and the talc data is graphed. Q. Okay. All right. We'll go through it. A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours the higher concentration at eight hours dioxide altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection. BY MR. SMITH:  Q. Can you show it to me? MR. FROST: Objection. THE WITNESS: It's not on this chart. BY MR. SMITH:  BY MR. SMITH:  BY MR. SMITH:  Can you know it to me? THE WITNESS: It's not on this chart.  A. Yes. Can yo kay. All right. A. We went through this before. Let's look at Figure 1, and the talc data is graphed. A. We went through this before. Let's look at Figure 1, and the talc data is graphed.  A. We went through this before. Let's look at Figure 1, and the talc data is graphed.  A. We went through this before. Let's look at Figure 1, and the talc data is graphed.  A. We went through this before. Let's look at Figure 1, and the talc data is graphed.  A. We went through this before.  Let's look at Figure 1, and the talc data is graphed.  Q. Okay. All right. We'll go through it.  A. Ve'll go through it.  A. Okay.  Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells  A. Yes.  Q. And that you admitted that they're minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right?  A. Yes.  Q. Okay. And this study did			I	
1 BY MR. SMITH: 2 Q. My question had to do 3 you're talking and stated that tale 4 was an inert substance and it did not 5 react with cells. And you said it's 6 inert just like titanium dioxide and 7 glass beads that were controls. And I 8 said what is the definition of inert? 9 A. Okay. So 10 Q. And you said causes cellular 11 responses. And my question to you is, show me. I can see where tale at high 11 tale react differently to human cells 13 the higher concentration at eight hours 14 altered 30 genes. Show me on this chart 15 where glass beads or fine titanium 16 dioxide altered any. 17 MR. FROST: Objection. 18 BY MR. SMITH: 18 MR. FROST: Objection. 20 Can you show it to me? 21 THE WITNESS: It's not on 21 the ships to depending on the shape, size, and crystallinity of minerals such as asbestos and tale vary from type and grade of tale and different types and different mines that they're mined from, right? 21 A. Yes. 22 A. Yes. 23 BY MR. SMITH: 24 BY MR. SMITH: 25 BY MR. SMITH: 26 Okay. We'll get there. 27 A. We went through this before. 28 Let's look at Figure 1, and the tale data is graphed. 29 Okay. All right. We'll go through it. 30 Okay. All right. We'll go through it. 41 A. Okay. 42 Okay. All right. We'll go through it. 43 D. Okay. All right. We'll go through it. 44 A. Okay. 45 Okay. 46 Okay. 47 Okay. 48 Okay. 49 Okay. All right we'll go through it. 40 Okay. 41 Okay. 41 Okay. 41 Okay. 42 Okay. All right we'll go through it. 41 Okay. 42 Okay. 43 Okay. 44 A. Okay. 44 Okay. 45 Okay. 46 Okay. 47 Okay. 48 Okay. 48 Okay. 49 Okay. All right we'll go through it. 49 Okay. All right we'll go through it. 40 Okay. 41 Okay. 40 Okay. 41 Okay. 41 Okay. 42 Okay. 43 Okay. 44 Okay. 44 Okay. 44 Okay. 44 Okay. 45 Okay. 48 Okay. 49 Okay. All right. We'll go the all cand different mines that they're mined from, right? 40 Okay. 41 Okay. 41 Okay. 42 Okay. 43 Okay. 44 Okay. 44 Okay. 44 Okay. 45 Okay. 46 Okay. 47 Okay. 48 Okay. 48 Okay. 49 Okay. Ald that al. 48 Okay. 40 Okay. 41 Okay. 41 Okay. 41 Okay. 42 Okay. 41 O		coject to nomesponsiveness.		THE WITHESS. 163, We did:
Q. My question had to do you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I said what is the definition of inert? A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours shower glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  BY MR. SMITH:  Q. Okay. We'll get there. A. We went through this before. Let's look at Figure 1, and the talc data is graphed. Q. Okay. All right. We'll go through it. Q. Okay. All right. We'll go through it. Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells depending on the shape, size shape, size, and crystallinity; is that correct? A. Yes. Q. And that you admitted that A. We went through this before. Let's look at Figure 1, and the talc data is graphed. Q. Okay. All right. We'll go through it. Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells depending on the shape, size shape, size, and crystallinity; is that correct? A. Yes. Q. And that you admitted that Shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right?  A. Yes.		Page 395		Page 397
you're talking and stated that talc was an inert substance and it did not react with cells. And you said it's linert just like titanium dioxide and glass beads that were controls. And I A. We went through this before. Let's look at Figure 1, and the talc data is graphed. Q. Okay. All right. We'll go through it. A. Okay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours the higher concentration at eight hours dioxide altered 30 genes. Show me on this chart MR. FROST: Objection.  BY MR. SMITH:  MR. FROST: Objection.  MR. FROST: O	1	BY MR. SMITH:	1	It's in the data.
was an inert substance and it did not react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I Rokay. So Q. And you said causes cellular responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours the higher dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  We went through this before. Let's look at Figure 1, and the talc data is graphed. Q. Okay. All right. We'll go through it. A. Okay. Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells talc react differently to human cells depending on the shape, size shape, size, and crystallinity; is that correct? A. Yes. Q. And that you admitted that from type and grade of talc and different types and different mines that they're mined from, right? A. Yes. BY MR. SMITH:  A. We went through this before. Let's look at Figure 1, and the talc data is graphed. Q. Okay. All right. We'll go through it. A. Okay.  Q. You stated earlier in the depo that minerals such as asbestos and talc react differently to human cells talc react differently to human cells size, and crystallinity; is that correct?  A. Yes. Q. And that you admitted that from type and grade of talc and different types and different mines that they're mined from, right?  A. Yes.	2	Q. My question had to do	2	BY MR. SMITH:
react with cells. And you said it's inert just like titanium dioxide and glass beads that were controls. And I  A. Okay. So  Q. And you said causes cellular  responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours the higher concentration at eight hours dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  MR. FROST: Objection.  MR. FROST:	3	you're talking and stated that talc	3	Q. Okay. We'll get there.
inert just like titanium dioxide and glass beads that were controls. And I  Responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours dioxide altered 30 genes. Show me on this chart MR. FROST: Objection.  BY MR. SMITH:  Giass beads that were controls. And I  Responses. And I my question to you is, altered 30 genes. Show me on this chart MR. FROST: Objection.  MR. FROST: Ob	4	was an inert substance and it did not	4	A. We went through this before.
glass beads that were controls. And I said what is the definition of inert?  A. Okay. So  Q. And you said causes cellular responses. And my question to you is, the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium folioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  MR. FROST: Objection.  MR.	5	react with cells. And you said it's	5	Let's look at Figure 1, and the talc data
glass beads that were controls. And I  8 said what is the definition of inert?  9 A. Okay. So  10 Q. And you said causes cellular  11 responses. And my question to you is,  12 show me. I can see where talc at high  13 the higher concentration at eight hours  14 altered 30 genes. Show me on this chart  15 where glass beads or fine titanium  16 dioxide altered any.  17 MR. FROST: Objection.  18 BY MR. SMITH:  19 Q. Okay. All right. We'll go  18 through it.  9 A. Okay.  10 Q. You stated earlier in the  11 depo that minerals such as asbestos and talc react differently to human cells  12 talc react differently to human cells  13 depending on the shape, size shape,  14 size, and crystallinity; is that correct?  15 A. Yes.  Q. And that you admitted that  17 shape, size, and crystallinity of  18 minerals such as asbestos and talc vary  19 prom type and grade of talc and different  19 prom type and grade of talc and different  10 prom types and different mines that they're  11 prom types and different mines that they're  12 prom types and different mines that they're  13 prom types and different mines that they're  14 prom types and different mines that they're  15 prom types and different mines that they're  16 prom types and different mines that they're  17 prom types and different mines that they're  18 prom types and different mines that they're  19 prom types and different mines that they're  10 prom types and different mines that they're  11 prom types and different mines that they're  12 prom types and different mines that they're  13 prom types and different mines that they're  14 prom types and different mines that they're  15 prom types and different mines that they're  16 prom types and different mines that they're  17 prom types and different mines that they're  18 prom types and different mines that they're  19 prom types and types and types and types and t	6	inert just like titanium dioxide and	6	is graphed.
8 said what is the definition of inert? 9 A. Okay. So 10 Q. And you said causes cellular 11 responses. And my question to you is, 12 show me. I can see where talc at high 13 the higher concentration at eight hours 14 altered 30 genes. Show me on this chart 15 where glass beads or fine titanium 16 dioxide altered any. 17 MR. FROST: Objection. 18 BY MR. SMITH: 19 Q. Can you show it to me? 20 MR. FROST: Objection. 21 THE WITNESS: It's not on 22 this chart. 23 BY MR. SMITH: 24 Chrough it. 29 A. Okay. 20 An okay. 20 An okay. 21 through it. 29 A. Okay. 20 An okay. 21 through it. 20 A. Okay. 20 An okay. 21 through it. 21 A. Okay. 21 A. Okay. 21 through it. 22 A. Okay. 23 through it. 24 A. Okay. 24 A. Okay. 25 A. Okay. 26 A. Okay. 27 A. Okay. 28 A. Okay. 29 A. Okay. 20 And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right? 28 A. Yes. 29 A. Yes. 20 Okay. And this study did	7	glass beads that were controls. And I	7	
A. Okay. So  Q. And you said causes cellular  responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours  altered 30 genes. Show me on this chart where glass beads or fine titanium  MR. FROST: Objection.  BY MR. SMITH:  MR. FROST: Objection.  MR. FROST: Obje	8	said what is the definition of inert?	8	
responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium to dioxide altered any. The higher concentration at eight hours altered any. The higher concentration at eight hours altered 30 genes. Show me on this chart to where glass beads or fine titanium to dioxide altered any. The higher concentration at eight hours to depending on the shape, size shape, size, and crystallinity; is that correct? The higher concentration at eight hours to size, and crystallinity; is that correct?  A. Yes.  Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right?  The WITNESS: It's not on the shape, size and crystallinity; is that correct?  A. Yes.  A. Yes.  A. Yes.  A. Yes.  A. Yes.  O. Okay. And this study did	9	A. Okay. So	9	
responses. And my question to you is, show me. I can see where talc at high the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium to dioxide altered any. The higher concentration at eight hours altered any. The higher concentration at eight hours altered 30 genes. Show me on this chart to where glass beads or fine titanium to dioxide altered any. The higher concentration at eight hours to depending on the shape, size shape, size, and crystallinity; is that correct? The higher concentration at eight hours to size, and crystallinity; is that correct?  A. Yes.  Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right?  The WITNESS: It's not on the shape, size and crystallinity; is that correct?  A. Yes.  A. Yes.  A. Yes.  A. Yes.  A. Yes.  O. Okay. And this study did	10	Q. And you said causes cellular	10	Q. You stated earlier in the
the higher concentration at eight hours the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium the higher concentration at eight hours altered 30 genes. Show me on this chart the higher concentration at eight hours depending on the shape, size shape, size, and crystallinity; is that correct? A. Yes.  Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary growth from type and grade of talc and different types and different mines that they're this chart.  THE WITNESS: It's not on the higher concentration at eight hours depending on the shape, size shape, size, and crystallinity; is that correct? A. Yes.  O. Okay. And this study did	11		11	depo that minerals such as asbestos and
the higher concentration at eight hours altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?  MR. FROST: Objection.  MR.	12		12	•
altered 30 genes. Show me on this chart where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?  MR. FROST: Objection.  MR. FROST: Objection.	13		13	
where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?  MR. FROST: Objection.  THE WITNESS: It's not on  this chart.  MR. SMITH:  MR. FROST: Objection.  MR. FROST:			14	
dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. And that you admitted that  shape, size, and crystallinity of  minerals such as asbestos and talc vary  growth of type and grade of talc and different  minerals such as asbestos and talc vary  from type and grade of talc and different  types and different mines that they're  THE WITNESS: It's not on  this chart.  BY MR. SMITH:  22 A. Yes.  Q. Okay. And this study did		altered 30 genes. Show me on this chart		size, and erystammer, is that confect.
17 MR. FROST: Objection.  18 BY MR. SMITH:  19 Q. Can you show it to me?  20 MR. FROST: Objection.  21 The WITNESS: It's not on  22 this chart.  23 BY MR. SMITH:  25 Shape, size, and crystallinity of  26 minerals such as asbestos and talc vary  27 from type and grade of talc and different  28 types and different mines that they're  29 mined from, right?  20 A. Yes.  21 Q. Okay. And this study did	14			
BY MR. SMITH:  18 minerals such as asbestos and talc vary 19 Q. Can you show it to me? 19 from type and grade of talc and different 20 MR. FROST: Objection. 20 types and different mines that they're 21 THE WITNESS: It's not on 22 mined from, right? 23 BY MR. SMITH: 23 Q. Okay. And this study did	14 15	where glass beads or fine titanium	15	A. Yes.
19Q. Can you show it to me?19from type and grade of talc and different20MR. FROST: Objection.20types and different mines that they're21THE WITNESS: It's not on21mined from, right?22this chart.22A. Yes.23BY MR. SMITH:23Q. Okay. And this study did	14 15 16	where glass beads or fine titanium dioxide altered any.	15 16	<ul><li>A. Yes.</li><li>Q. And that you admitted that</li></ul>
MR. FROST: Objection.  THE WITNESS: It's not on  this chart.  BY MR. SMITH:  20 types and different mines that they're mined from, right?  A. Yes.  Q. Okay. And this study did	14 15 16 17	where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.	15 16 17	A. Yes. Q. And that you admitted that shape, size, and crystallinity of
21 THE WITNESS: It's not on 21 mined from, right? 22 this chart. 22 A. Yes. 23 BY MR. SMITH: 23 Q. Okay. And this study did	14 15 16 17 18	where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection. BY MR. SMITH:	15 16 17 18	A. Yes. Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary
22 this chart. 22 A. Yes. 23 BY MR. SMITH: 23 Q. Okay. And this study did	14 15 16 17 18	where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?	15 16 17 18 19	A. Yes. Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different
23 BY MR. SMITH: 23 Q. Okay. And this study did	14 15 16 17 18 19	where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?  MR. FROST: Objection.	15 16 17 18 19 20	A. Yes. Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're
	14 15 16 17 18 19 20 21	where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?  MR. FROST: Objection.  THE WITNESS: It's not on	15 16 17 18 19 20 21	A. Yes. Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right?
2, y p	14 15 16 17 18 19 20 21 22	where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?  MR. FROST: Objection.  THE WITNESS: It's not on this chart.	15 16 17 18 19 20 21 22	A. Yes. Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right? A. Yes.
	14 15 16 17 18 19 20 21 22 23	where glass beads or fine titanium dioxide altered any.  MR. FROST: Objection.  BY MR. SMITH:  Q. Can you show it to me?  MR. FROST: Objection.  THE WITNESS: It's not on this chart.  BY MR. SMITH:	15 16 17 18 19 20 21 22 23	A. Yes. Q. And that you admitted that shape, size, and crystallinity of minerals such as asbestos and talc vary from type and grade of talc and different types and different mines that they're mined from, right? A. Yes. Q. Okay. And this study did

100 (Pages 394 to 397)

1 2	Page 398		Page 400
	MR. FROST: Objection.	1	human fallopian tube cells?
	THE WITNESS: It tested	2	A. No. Well, let me I want
3	industrial talc.	3	to qualify that, because I'm not certain
4	BY MR. SMITH:	4	where these ovarian epithelial cells came
5	Q. It did not test	5	from. They came from a tissue bank.
6	`	6	
7	cosmetic-grade talc, correct?	7	They were normal in terms of they grew in anchorage-dependent conditions.
	MR. FROST: Objection. THE WITNESS: It did not		
8		8	But I don't want to tell you
9	look at that directly.	9	what their source is without looking it
10	BY MR. SMITH:	10	up further.
11	Q. And it did not therefore,	11	Q. In Table 3 of Shukla, the
12	did not test the type of or the grade of	12	genes that were upregulated at
13	tale that's in Baby Powder or Shower to	13	75 micrometers squared per centimeter
14	Shower, correct?	14	squared at eight hours, do you know if
15	MR. FROST: Objection.	15	any of those genes have been associated
16	THE WITNESS: The grade of	16	with primary peritoneal mesotheliomas?
17	talc again, you'll have to fill	17	MR. FROST: Objection.
18	me in on what grade means.	18	THE WITNESS: The I
19	BY MR. SMITH:	19	don't. They're certainly
20	Q. So you don't know that the	20	indicative of some of the pathways
21	grade of talc that's in Baby Powder or	21	we've followed up on. But we
22	Shower to Shower is cosmetic-grade talc?	22	haven't isolated these out
23	A. I'm assuming it is.	23	individually to study them.
24	Q. So the study did not examine	24	BY MR. SMITH:
	Page 399		Page 401
1	the type or the type of talc that is	1	Q. So you don't know if any of
2	in Baby Powder or Shower to Shower, the	2	these genes that were upregulated in
3	particular grade, correct?	3	Table 3 by talc are actually those genes
4	MR. FROST: Objection.	4	involved in the development of peritoneal
5	THE WITNESS: The source of	5	cancer?
6	talc was a mining talc.	6	MR. FROST: Objection.
7	BY MR. SMITH:	7	THE WITNESS: That's
8	Q. And what mine did the talc	8	correct. I don't know about genes
9	used in the Shukla study come from?	9	that are upregulated in peritoneal
10	A. It's something called	10	cancers.
11	Barrett's Minerals. I don't know where	11	MR. SMITH: Okay. I'm going
12	the mine is.	12	to attach the next numbered
13	Q. I believe it's in Montana.	13	exhibit, which would be 40.
14	It states in the study.	14	(Document marked for
15	Did the study use the talc	15	identification as Exhibit
16	from any of the mines that J&J used for	16	Mossman-40.)
17	its Baby Powder or Shower to Shower	17	BY MR. SMITH:
18	products, that being from Vermont, Italy,	18	Q. This is the lead author
19	Korea, or China?	19	is Dragon. Have you ever seen this
20	MR. FROST: Objection.	20	study? It's from 2015.
21	THE WITNESS: No.	21	A. Yes.
22	BY MR. SMITH:	22	Q. You have seen this?
23	Q. Okay. Have you ever	23	A. I have.
24	performed a study on tale's effect on	24	Q. "Differential Susceptibility

101 (Pages 398 to 401)

	D 402		D 404
	Page 402		Page 404
1	of Human Pleural and Peritoneal	1	mesothelioma.
2	Mesothelial Cells to Asbestos Exposure"?	2	Do you see that, the fold
3	A. Yes.	3	changes?
4	Q. It states in the abstract	4	A. These aren't mesothelioma
5	actually this is from Vermont College	5	cells. These are two normal cell lines
6	here, right, College of Medicine?	6	that are normal pleural mesothelial cells
7	A. Yeah. Dr. Shukla is the	7	and a cell line including one we used in
8	senior author.	8	our study, that were peritoneal.
9	Q. That's correct. And the	9	Q. Correct.
10	abstract, "Malignant mesothelioma, or MM,	10	A. So these are not tumors.
11	is an aggressive cancer of mesothelial	11	You can't say anything about
12	cells of the pleural and peritoneal	12	Q. That's not what I'm I
13	cavities. In 85 percent of cases both	13	didn't mention tumor. You're the one
14	pleural and peritoneal malignant	14	that brought up tumor. I did not say
15	mesothelioma is caused by asbestos	15	that, did I?
16	exposure. Although both are	16	A. No, you didn't, but you said
17	asbestos-induced cancers, the incidence	17	mesothelioma cells.
18	of pleural malignant mesothelioma is	18	Q. Well, we see that IL-8,
19	significantly higher at 85 percent than	19	CXCL2, CXCL3, IL-6, ATF3 were all
20	peritoneal malignant mesothelioma at	20	upregulated in pleural mesothelial cells
21	15 percent."	21	and in peritoneal mesothelial cells.
22	And down at the bottom it	22	Do you see that?
23	says, "Our results are consistent with	23	A. Yes. By asbestos.
24	the hypothesis that differences in	24	Q. Okay. And were those some
	Page 403		Page 405
1			
т	incidences of pleural and peritoneal	1	of the same cell lines excuse me.
2	incidences of pleural and peritoneal malignant mesothelioma upon exposure to	1 2	of the same cell lines excuse me. Were those some of the same genes, IL-8,
2	malignant mesothelioma upon exposure to	2	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial
2	malignant mesothelioma upon exposure to asbestos are the result of differences in	2	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were
2 3 4	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to	2 3 4	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial
2 3 4 5	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response	2 3 4 5	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight
2 3 4 5 6	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."	2 3 4 5 6	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?
2 3 4 5 6 7	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?	2 3 4 5 6 7	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.
2 3 4 5 6 7 8	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do.	2 3 4 5 6 7 8	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:
2 3 4 5 6 7 8	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?	2 3 4 5 6 7 8 9 10	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.
2 3 4 5 6 7 8 9	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?  MR. FROST: Objection.	2 3 4 5 6 7 8 9	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many
2 3 4 5 6 7 8 9 10	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with	2 3 4 5 6 7 8 9 10	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?
2 3 4 5 6 7 8 9 10 11	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do.  Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.	2 3 4 5 6 7 8 9 10 11 12	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many
2 3 4 5 6 7 8 9 10 11 12 13	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and
2 3 4 5 6 7 8 9 10 11 12 13 14	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH: Q. Okay. And if you flip to	2 3 4 5 6 7 8 9 10 11 12 13	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and look, but they're chemokines. I believe
2 3 4 5 6 7 8 9 10 11 12 13 14 15	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH: Q. Okay. And if you flip to Page 24. It's a chart. If you look at	2 3 4 5 6 7 8 9 10 11 12 13 14 15	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH: Q. Okay. And if you flip to Page 24. It's a chart. If you look at it, Figure A is transcripts known to be	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and look, but they're chemokines. I believe
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do.  Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH:  Q. Okay. And if you flip to Page 24. It's a chart. If you look at it, Figure A is transcripts known to be involved with malignant mesothelioma that	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and look, but they're chemokines. I believe one of them might have been upregulated
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH: Q. Okay. And if you flip to Page 24. It's a chart. If you look at it, Figure A is transcripts known to be involved with malignant mesothelioma that were significantly differential	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and look, but they're chemokines. I believe one of them might have been upregulated by talc.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do. Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH: Q. Okay. And if you flip to Page 24. It's a chart. If you look at it, Figure A is transcripts known to be involved with malignant mesothelioma that were significantly differential differentially expressed in all cell	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and look, but they're chemokines. I believe one of them might have been upregulated by talc.  Q. IL-6?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do.  Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH:  Q. Okay. And if you flip to Page 24. It's a chart. If you look at it, Figure A is transcripts known to be involved with malignant mesothelioma that were significantly differential—differentially expressed in all cell lines.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and look, but they're chemokines. I believe one of them might have been upregulated by talc.  Q. IL-6?  A. Yeah. And this all makes
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do.  Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH:  Q. Okay. And if you flip to Page 24. It's a chart. If you look at it, Figure A is transcripts known to be involved with malignant mesothelioma that were significantly differential differentially expressed in all cell lines.  But if you look at IL-8	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and look, but they're chemokines. I believe one of them might have been upregulated by talc.  Q. IL-6?  A. Yeah. And this all makes sense, because we know that talc induces
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	malignant mesothelioma upon exposure to asbestos are the result of differences in mesothelial cell physiology that lead to differences in the inflammatory response which leads to cancer."  Do you see that?  A. I do.  Q. Do you agree with that?  MR. FROST: Objection.  THE WITNESS: I do with regard to cancer by asbestos.  BY MR. SMITH:  Q. Okay. And if you flip to Page 24. It's a chart. If you look at it, Figure A is transcripts known to be involved with malignant mesothelioma that were significantly differential differentially expressed in all cell lines.  But if you look at IL-8  IL-6, ATF3, ATF3, the CXCL2, CXCL3, those	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Were those some of the same genes, IL-8, CXCL2, CXCL3, IL-6 and ATF3 that were upregulated in peritoneal mesothelial cells at the concentrations of eight hours of talc in your study in Shukla?  MR. FROST: Objection.  THE WITNESS: Some of them, certainly the ATF3 was.  BY MR. SMITH:  Q. IL-8?  A. IL-8, which could have many functions.  Q. CXCL2 and CXCL3, correct?  A. I'd have to go back and look, but they're chemokines. I believe one of them might have been upregulated by talc.  Q. IL-6?  A. Yeah. And this all makes sense, because we know that talc induces acute inflammation and antiinflammation

	Page 406		Page 408
1	Q. And that was and the	1	you produced documents. Do you recall
2	same and pleural mesothelial cells	2	that?
3	were upregulated, those same genes were	3	A. I do.
4	upregulated by crocidolite asbestos that	4	Q. And and I'm going to
5	we know, you admit, causes mesothelioma,	5	attach that as an Exhibit 41.
6	correct?	6	(Document marked for
7	A. Are you suggesting that	7	identification as Exhibit
8	because a gene goes up it's associated	8	Mossman-41.)
9	with mesothelioma?	9	BY MR. SMITH:
10	Q. No, I'm just saying, would	10	Q. And just show it to you. Do
11	you agree with me that this chart shows	11	you recall this? Affidavit of Brooke
12	and tests crocidolite asbestos and shows	12	Mossman you provided to me?
13	gene changes in pleural mesothelial	13	A. Yes.
14	cells?	14	Q. Okay. And and I'll show
15	A. It shows gene changes in	15	you your signature at the back.
16	pleural and peritoneal mesothelial	16	A. Okay.
17	cells	17	Q. And that's your signature
18	Q. And my question	18	you provided to me?
19	A. Yeah.	19	A. Yes.
20	Q my question is, would you	20	Q. Okay. I'm going to attach
21	agree with me that crocidolite asbestos	21	that as Exhibit 41.
22	•	22	And you produced some
23	causes malignant mesothelioma?	23	documents to me. Some of some of
24	MR. FROST: Objection. THE WITNESS: Yes. But	24	them and there were a lot of drafts
24	THE WITNESS. Tes. But		them and there were a fot of drafts
	Page 407		Page 409
1	that's not what we're we're	1	of the Shukla paper. Do you recall that?
2	looking at here.	2	A. Yeah.
3	BY MR. SMITH:	3	Q. There were like a bunch of
4	Q. Okay. That's not what I'm	4	them.
5	saying. I'm just showing, on this chart,	5	A. It was it was the same
6	the different gene changes that by a	6	paper xeroxed many times. Yes.
7	known substance to cause malignant	7	Q. And so this was just earlier
8	mesothelioma, right?	8	drafts or the drafts that eventually
9	And some of the genes that	9	became the Shukla paper that we just went
10	were changed are IL-8, CXCL2, CXCL3,	10	over, correct?
11	IL-6, ATF3. And those were the same	11	A. Yes.
12	genes that were upregulated by talc at	12	(Document marked for
13	the higher concentration at eight hours	13	identification as Exhibit
14	in your Shukla paper, right?	14	Mossman-42.)
15	MR. FROST: Objection.	15	BY MR. SMITH:
16	THE WITNESS: Some of them	16	Q. Okay. I'm going to attach
17	were. I would say half of the	17	this as Exhibit 42. And it's entitled,
18	genes that were significant, the	18	"Alterations in Gene Expression in Human
19	IL-8, the ATF3, I believe one of	19	Mesothelial Cells Correlate With Mineral
20	the CXCL2s or 3. So some of them	20	Pathogenicity."
0.1	were common. Other ones were not.	21	It has Shukla at the
21		22	beginning and looks almost exactly like
21	BY MR. SMITH:	22	beginning and rooks annost exactly like
	BY MR. SMITH: Q. Okay. You provided an	23	the study that we attached as Exhibit 34,
22			

103 (Pages 406 to 409)

		1	
	Page 410		Page 412
1	publication, correct?	1	MR. FROST: Objection.
2	A. Yes.	2	THE WITNESS: I believe it
3	Q. Okay. And if you go to	3	is in the Hillegass paper. And I
4	Page 3, and look at the first large	4	seem to remember when I looked
5	paragraph in the last sentence.	5	over this correspondence that this
6	A. Mm-hmm.	6	was a comment that one of the
7	Q. "Moreover, the early	7	reviewers questioned, and he put
8	molecular events leading to injury by	8	in additional references.
9	asbestos fibers and other pathogenic or	9	BY MR. SMITH:
10	innocuous particulates in human cells	10	Q. I thought we might go to the
11	that may be targets for the development	11	reviewer comments because we have it
12	of disease remain enigmatic."	12	attached as Exhibit 36.
13	And that's the reason you	13	A. Yeah. I remember that.
14	performed this study to look at those	14	Q. Show me in the reviewer
15	changes, right?	15	comments where they say take that out.
16		16	
17	A. We were interested in gene	17	A. The Hillegass paper. They asked us
	profiling, yes, that's correct.	18	
18	Q. Okay. And if you go to the		Q. No, ma'am. Ma'am.
19	second paragraph, and you go just past	19	A. No.
20	Number 6. It's one, two, three, four,	20	Q. This is Shukla.
21	five, six lines down.	21	A. Yeah.
22	"This cell type is not	22	Q. This is the Shukla paper.
23	implicated in asbestos-induced diseases,	23	This is the draft of the Shukla paper.
24	but is occasionally linked to the	24	And that statement is in a draft of the
	Page 411		Page 413
1	inflammation and development of ovarian	1	Shukla paper that you provided me per the
2	cancer after use of talcum powder in the	2	affidavit that we just went over in
3	pelvic region, albeit highly	3	Exhibit 41.
4	controversial."	4	And I want you to show me in
5	Why didn't that statement	5	the Shukla paper that we just went over,
6	make it into the final?	6	it's peer reviewed, Exhibit Number 34
7	MR. FROST: Objection.	7	A. Yeah.
8	THE WITNESS: This cell type	8	Q where that statement is
9	is not implicated	9	in that study that's in the draft that
10	BY MR. SMITH:	10	you provided to me.
11	Q. Can you tell me why that	11	MR. FROST: Objection.
12	statement, and I went through all of	12	THE WITNESS: Okay. So I'm
13	them, and that's the only statement,	13	looking at the Shukla paper, and
14	otherwise they read just exactly alike.	14	that statement was Merritt in 2009
15	"This cell type is not implicated in	15	and it is in this. So
16	• • • •	16	BY MR. SMITH:
	asbestos-induced diseases, but is	17	
17	occasionally linked to inflammation and	1	Q. Where is it?
18	the development of ovarian cancer after	18	A. All right. Let me just
19	use of talcum powder in the pelvic	19	look. It's Reference Number 7?
20	region, albeit highly controversial."	20	It says although I'm
21	I want to know why that	21	admitting that you looked this looked
22	statement was taken out of the drafts and	22	this over very well. It says, "This cell
~ ~	not in the final peer-reviewed	23	type is not implicated in
23		1	
23 24	publication.	24	asbestos-induced diseases but is

104 (Pages 410 to 413)

	Page 414		Page 416
1	occasionally linked to inflammation and	1	MR. FROST: Take a short
2	the development of ovarian cancer after	2	break.
3	use of talcum powder in the pelvic	3	MR. SMITH: Sure. We can
4	region, although such links are highly	4	take a quick break.
5	controversial."	5	THE VIDEOGRAPHER: Going off
6	Q. Where is it?	6	the record. The time is 4:23.
7	A. It's in the final	7	(Short break.)
8	publication, exactly where I	8	THE VIDEOGRAPHER: We are
9	Q. I know. Point me to it. I	9	going back on record. Beginning
10	just missed it. Where is it?	10	of Media File Number 5. The time
11	A. Yeah, I guess you did.	11	is 4:38.
12	Q. I guess I did. I'm I am	12	BY MR. SMITH:
13	mortal. I apologize.	13	Q. Okay. So in Exhibit 39,
14	Where is it?	14	which is a chart in your study, I need to
15	A. Here you go.	15	correct
16	Q. Can you show me? Can you	16	A. Yes.
17	tell me where the	17	Q. I need to switch 24 to
18	A. It's exactly where it was in	18	eight
19	the draft, yeah.	19	A. Right.
20	MR. FROST: If you look at	20	Q and eight to 24, right?
21	Page 1, right-hand column. It's	21	A. Yes. That's correct.
22	the first full paragraph, last	22	Q. And I made those changes.
23	sentence.	23	Okay. And then over here,
24	BY MR. SMITH:	24	I've got a question in you have talc
	Page 415		Page 417
1	Q. I missed it. I stand	1	at low concentrations of ovarian
2	corrected.	2	epithelial cells, zero.
3	A. Wow.	3	Do you see that?
4	Q. I highlighted it right	4	A. It should be it should be
5	before it. Thank you.	5	high because we only added talc to the
6	A. You're welcome.	6	ovarian epithelial cells at high
7	Q. Do you agree with that	7	concentrations. So these they're the
8	statement, now that it's we've	8	right word, but they need to come down a
9	established that it's in your study?	9	little bit.
10	A. I agree that it's highly	10	Q. I'm with you.
11	controversial still.	11	A C
			A. See.
12	Q. Do you agree that it's been	12	Q. So this should be right
12 13	Q. Do you agree that it's been occasionally linked to inflammation in	12 13	Q. So this should be right here this should be zero right here?
12 13 14	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use	12 13 14	<ul><li>Q. So this should be right here this should be zero right here?</li><li>A. Right.</li></ul>
12 13 14 15	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the	12 13 14 15	<ul><li>Q. So this should be right here this should be zero right here?</li><li>A. Right.</li><li>Q. And that should be that</li></ul>
12 13 14 15 16	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?	12 13 14 15 16	<ul> <li>Q. So this should be right here this should be zero right here?</li> <li>A. Right.</li> <li>Q. And that should be that mark right there is for low</li> </ul>
12 13 14 15 16 17	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?  A. I believed in 2009, we	12 13 14 15 16 17	<ul> <li>Q. So this should be right here this should be zero right here?</li> <li>A. Right.</li> <li>Q. And that should be that mark right there is for low concentration?</li> </ul>
12 13 14 15 16 17 18	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?  A. I believed in 2009, we referenced or we looked at the Ness and	12 13 14 15 16 17 18	Q. So this should be right here this should be zero right here? A. Right. Q. And that should be that mark right there is for low concentration? A. Right. Right. Right.
12 13 14 15 16 17 18 19	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?  A. I believed in 2009, we referenced or we looked at the Ness and Cottreau, which was a hypothesis paper	12 13 14 15 16 17 18 19	Q. So this should be right here this should be zero right here? A. Right. Q. And that should be that mark right there is for low concentration? A. Right. Right. Right. So in this case, yes.
12 13 14 15 16 17 18 19 20	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?  A. I believed in 2009, we referenced or we looked at the Ness and Cottreau, which was a hypothesis paper and it is still a hypothesis that the	12 13 14 15 16 17 18 19 20	Q. So this should be right here this should be zero right here? A. Right. Q. And that should be that mark right there is for low concentration? A. Right. Right. Right. So in this case, yes. Q. All right. If you look at
12 13 14 15 16 17 18 19 20 21	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?  A. I believed in 2009, we referenced or we looked at the Ness and Cottreau, which was a hypothesis paper and it is still a hypothesis that the scientific data does not support.	12 13 14 15 16 17 18 19 20 21	Q. So this should be right here this should be zero right here? A. Right. Q. And that should be that mark right there is for low concentration? A. Right. Right. Right. So in this case, yes. Q. All right. If you look at your paper
12 13 14 15 16 17 18 19 20 21 22	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?  A. I believed in 2009, we referenced or we looked at the Ness and Cottreau, which was a hypothesis paper and it is still a hypothesis that the scientific data does not support.  Q. Okay. Let's talk about	12 13 14 15 16 17 18 19 20 21 22	Q. So this should be right here this should be zero right here? A. Right. Q. And that should be that mark right there is for low concentration? A. Right. Right. Right. So in this case, yes. Q. All right. If you look at your paper A. Yeah.
12 13 14 15 16 17 18 19 20 21 22 23	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?  A. I believed in 2009, we referenced or we looked at the Ness and Cottreau, which was a hypothesis paper and it is still a hypothesis that the scientific data does not support.  Q. Okay. Let's talk about MR. SMITH: Are we okay? Or	12 13 14 15 16 17 18 19 20 21 22 23	Q. So this should be right here this should be zero right here? A. Right. Q. And that should be that mark right there is for low concentration? A. Right. Right. Right. So in this case, yes. Q. All right. If you look at your paper A. Yeah. Q and you go to
12 13 14 15 16 17 18 19 20 21 22	Q. Do you agree that it's been occasionally linked to inflammation in the development of ovarian cancer use after the use of talcum powder in the pelvic region?  A. I believed in 2009, we referenced or we looked at the Ness and Cottreau, which was a hypothesis paper and it is still a hypothesis that the scientific data does not support.  Q. Okay. Let's talk about	12 13 14 15 16 17 18 19 20 21 22	Q. So this should be right here this should be zero right here? A. Right. Q. And that should be that mark right there is for low concentration? A. Right. Right. Right. So in this case, yes. Q. All right. If you look at your paper A. Yeah.

105 (Pages 414 to 417)

	Page 418	<u> </u>	Page 420
1	Q. Shukla.	1	A. This is the
2	A. Okay.	2	MR. FROST: Objection.
3	MR. MIZGALA: I think it was	3	THE WITNESS: gene
4	right the way it was.	4	you're talking about the toxicity
5	THE WITNESS: High had no	5	data here. We did and I
6	results.	6	
7	MR. SMITH: That's right.	7	believe it's stated in this paper. We did a range of concentrations
8	BY MR. SMITH:	8	with the talc up to 20. And I
9	44 . 44	9	think we make the statement that
10	Q. All right. These are the epithelial ovarian epithelial cells,	10	in no cases was there toxicity to
11	right?	11	the ovarian epithelial cells. So
12	A. Yes.	12	it's here somewhere.
13	Q. Okay. And at 24 hours you	13	BY MR. SMITH:
14	have zero at high concentrations, right?	14	Q. Well, my question is also, I
15	Cell gene changes, right?	15	didn't think you tested tale at high
16	A. Yes.	16	concentrations.
17	Q. Okay. If you look at Page 5	17	A. We only did that in the
18	of 10.	18	ovarian epithelial cells, because of
19	A. Yes.	19	we, in all of these, we had done
20	Q. And it says, "At	20	preliminary studies, and our original
21	24 hours" down at the bottom under	21	ones indicated that we had no toxicity
22	"IOSE ovarian epithelial cells exhibit	22	and no effect. So we did the whole
23	few gene expression changes," it says,	23	experiment for microarrays at the high
24	"At 24 hours, high concentrations of	24	concentration.
	1102 i nouro, ingli concentrations of		Concentration
	Page 419		Page 421
1	asbestos caused less than fourfold	1	Q. Where is that data that
2	increases in expression of only 16 genes	2	shows that?
3	and decreased" hold on. Am I in the	3	A. Okay. It's probably in here
4	right spot? No, I'm not.	4	somewhere.
5	Let's go back to 4 of 10.	5	Q. And data
6	I'm sorry.	6	A. Here we go.
7	A. Okay.	7	Q. Data not shown or
8	Q. "Asbestos fibers at high	8	referenced, where can I get that data?
9	concentrations are toxic to TP9/TERT-1	9	A. I believe some of it might
10	mesothelial cells and less so to ovarian	10	have been in supplementary data in this
11	epithelial cells in contrast to particle	11	journal.
12	preparations."	12	Q. Can you give me a
13	It talks about, "Non-fibrous	13	supplemental journal where that
14	talc at 75 micrometers squared per	14	A. Wait. Let me just make sure
15	centimeter squared was nontoxic, and	15	then. Figure 2D. Okay. So, in terms of
16	significant increases in toxicity were	16	the toxicity data for tale, it is in
17	only achieved with addition of talc at	17	Figure 2D, and that's the ovarian
18	greater than threefold concentrations in	18	epithelial cells. So there is data
	LPU/IEPI Loolle (Franco 7A) but not in	19	presented on the cytotoxicity.
19	LP9/TERT-1 cells (Figure 2A), but not in	0.0	0 117 11 1 11
20	IOSE cells (data not shown)."	20	Q. Well, hold on a second,
20 21	IOSE cells (data not shown)."  A. Right.	21	because Table 6 it says in your
20 21 22	IOSE cells (data not shown)."  A. Right. Q. Okay. Is that data	21 22	because Table 6 it says in your right here on Exhibit 39. Table 6, "Talc
20 21 22 23	IOSE cells (data not shown)."  A. Right. Q. Okay. Is that data not how where is this data to be	21 22 23	because Table 6 it says in your right here on Exhibit 39. Table 6, "Talc does not cause altered gene expression in
20 21 22	IOSE cells (data not shown)."  A. Right. Q. Okay. Is that data	21 22	because Table 6 it says in your right here on Exhibit 39. Table 6, "Talc

	Page 422		Page 424
1	cells."	1	were just discussing, and it says data
2	We're not talking about	2	not shown.
3	toxicity. We're talking about gene	3	A. Right. No significant gene
4	expression changes.	4	upregulation or downregulation in
5	A. Right.	5	response to lower concentrations of
6	Q. And you're writing zero down	6	asbestos. So no significant changes,
7	right here that you tested tale at high	7	data not shown. At high concentrations
8	concentrations and got zero gene	8	are what is expressed in Table 4.
9	expression changes.	9	Q. Where are you reading that?
10	My question is, where is	10	A. I'm reading this on 5 of 10
11	that?	11	under IOSE ovarian epithelial cells.
12	A. Not in it says okay.	12	Q. It says, "Data not shown,"
13	(Reading to herself.)	13	correct?
14	Okay. So if it didn't have	14	A. That's correct.
15	any significant gene changes, like for	15	
16		1	Q. Where can I get that data?
17	the other materials, it wouldn't have	16	A. It could be supplemental or
	been presented, because there was no	17	it may not have been presented at all.
18	significant increase in any of the genes.	18	Q. Would I have would there
19	Q. Well, you have zero here.	19	be any notes or lab notes or anything, or
20	Where is that? Where does it show that	20	where I mean, I haven't seen an
21	there are no no changes? Where does	21	updated study of where that where you
22	it state that?	22	get zero here, besides a statement. I
23	A. It's stated here. Hold on.	23	don't see like any testing or tables.
24	I think we've got it with the asbestos.	24	MR. FROST: Objection.
	Page 423		Page 425
1	Okay. Let me just see if it's in the	1	THE WITNESS: I think it's
2	Okay. So, yeah. So this is important to	2	the same thing that I explained to
3	look at, because in Table 4 at the high	3	you before, is that we got no
4	concentrations, you see only one number	4	significant gene changes looking
5	at the top, and the 2s are not	5	at thousands of genes, and that
6	significantly elevated.	6	you don't you present in these
7	So the data is just shown at	7	findings what you did find, which
8	the high concentrations of materials. At	8	are what you see in all these
9	the low concentrations there were no gene	9	figures.
10	changes.	10	So for any gene expression
11	Q. I understand that. But	11	data, you're not going to see
12	where I see the genes upregulated by	12	numbers or negative numbers for
13	crocidolite asbestos and IOSE human	13	5,000 or some odd genes. It's
14	ovarian cells.	14	you don't express it like that.
15	A. Yes.	15	BY MR. SMITH:
16	Q. I do not a I do not see a	16	Q. So there was data. It just
17	table or a sentence about zero being	17	wasn't included in this study.
18	found for talc.	18	•
18 19			A. No. It was included in the
	A. It's stated.	19	statistical analyses, but it was
20 21	Q. Where?	20	insignificant; therefore, it was not
. , ,	A. In the results. Let's look	21	graphed, because the numbers were at the
		22	ordinate of each graph.
22	where we describe the IO cells.		= =
22 23	All right.	23	Q. I want to talk about the
22			= =

107 (Pages 422 to 425)

	Page 426		Page 428
1		1	
1	A. Okay.	1	was pathogenic, correct?
2	MS. O'DELL: Excuse me for a	2	A. Yes.
3	moment. We Request that data that	3	Q. And since talc was not
4	Dr. Mossman has just testified to,	4	subject to this test, we don't know what
5	including the raw data, any	5	cytokines would have been released with
6	statistical analyses and outputs	6	exposure to talc and its relevance to
7	of where the affected data has	7	talc's ability to cause disease from this
8	been noted.	8	study, correct?
9	THE WITNESS: This paper was	9	MR. FROST: Objection.
10	15 years ago. So there's not	10	THE WITNESS: Right. The
11	going to be any data. We did the	11	levels of gene expression by talc
12	literature search to try and find	12	were so small that we would not
13	it.	13	have expected an increase in terms
14	MS. O'DELL: The there's	14	of proteins.
15	data that's published in the table	15	BY MR. SMITH:
16	in her report that's not reflected	16	Q. That that wasn't my
17	in the peer-reviewed publication,	17	question.
18	and we want to know what the	18	My question was, since
19	underlying basis is for that data.	19	talc
20	So that's the question.	20	MR. SMITH: And I object to
21	MR. FROST: We'll take it	21	nonresponsiveness.
22	under advisement. Just send a	22	BY MR. SMITH:
23	letter, take it under advisement.	23	
24		24	Q. Since talc was not subjected
2 <del>4</del>	Or an e-mail.	24	to this test, we do not know what
	Page 427		Page 429
1	BY MR. SMITH:	1	cytokines would have been released with
2	Q. Let's move to the Hillegass	2	exposure to talc and its relevance to
3	study. And that's Exhibit 35. What type	3	talc's ability to cause disease from this
4	of asbestos did you look at in this	4	study, correct?
5	study?	5	MR. FROST: Objection.
6	A. It's crocidolite.	6	THE WITNESS: Again, we
7	Q. And is crocidolite one of	7	didn't look at that because the
8			
	the aspestos types that is found in Baby	l 8	
	the asbestos types that is found in Baby Powder or Shower to Shower that we	8	results were reversible and not of
9	Powder or Shower to Shower that we	9	results were reversible and not of a magnitude that one would expect
9 10	Powder or Shower to Shower that we discussed earlier?	9 10	results were reversible and not of a magnitude that one would expect protein to be increased.
9 10 11	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge.	9 10 11	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH:
9 10 11 12	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that	9 10 11 12	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH:  Q. Okay. I asked you this
9 10 11 12 13	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge.  Q. And you told me earlier that different types of asbestos affect human	9 10 11 12 13	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH:  Q. Okay. I asked you this question in Brower, do you recall that?
9 10 11 12 13 14	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge.  Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct?	9 10 11 12 13 14	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection.
9 10 11 12 13 14	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct? A. Yes. Our studies have been	9 10 11 12 13 14 15	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No.
9 10 11 12 13 14 15	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct? A. Yes. Our studies have been with chrysotile and crocidolite asbestos,	9 10 11 12 13 14 15 16	results were reversible and not of a magnitude that one would expect protein to be increased. BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No. BY MR. SMITH:
9 10 11 12 13 14 15 16 17	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct?  A. Yes. Our studies have been with chrysotile and crocidolite asbestos, and amosite, which falls into the same	9 10 11 12 13 14 15 16 17	results were reversible and not of a magnitude that one would expect protein to be increased. BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No. BY MR. SMITH: Q. Okay. Look at Page 195 of
9 10 11 12 13 14 15 16 17	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct? A. Yes. Our studies have been with chrysotile and crocidolite asbestos, and amosite, which falls into the same category as crocidolite in terms of	9 10 11 12 13 14 15 16 17	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No.  BY MR. SMITH: Q. Okay. Look at Page 195 of your testimony in Brower. 194 and 195.
9 10 11 12 13 14 15 16 17 18	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct? A. Yes. Our studies have been with chrysotile and crocidolite asbestos, and amosite, which falls into the same category as crocidolite in terms of results on cells.	9 10 11 12 13 14 15 16 17 18	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No.  BY MR. SMITH: Q. Okay. Look at Page 195 of your testimony in Brower. 194 and 195. A. Okay. 194 and 195?
9 10 11 12 13 14 15 16 17 18 19 20	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct?  A. Yes. Our studies have been with chrysotile and crocidolite asbestos, and amosite, which falls into the same category as crocidolite in terms of results on cells.  Q. Hillegass study involved	9 10 11 12 13 14 15 16 17 18 19 20	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No.  BY MR. SMITH: Q. Okay. Look at Page 195 of your testimony in Brower. 194 and 195. A. Okay. 194 and 195? Q. Correct.
9 10 11 12 13 14 15 16 17 18 19 20 21	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct?  A. Yes. Our studies have been with chrysotile and crocidolite asbestos, and amosite, which falls into the same category as crocidolite in terms of results on cells.  Q. Hillegass study involved gene profiling and proteomics, bioplex	9 10 11 12 13 14 15 16 17 18 19 20 21	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No.  BY MR. SMITH: Q. Okay. Look at Page 195 of your testimony in Brower. 194 and 195. A. Okay. 194 and 195? Q. Correct. A. Okay.
9 10 11 12 13 14 15 16 17 18 19 20 21 22	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct?  A. Yes. Our studies have been with chrysotile and crocidolite asbestos, and amosite, which falls into the same category as crocidolite in terms of results on cells.  Q. Hillegass study involved gene profiling and proteomics, bioplex proteins, cytokines released from	9 10 11 12 13 14 15 16 17 18 19 20 21 22	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No.  BY MR. SMITH: Q. Okay. Look at Page 195 of your testimony in Brower. 194 and 195. A. Okay. 194 and 195? Q. Correct. A. Okay. Q. And I'm going to start on
9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct? A. Yes. Our studies have been with chrysotile and crocidolite asbestos, and amosite, which falls into the same category as crocidolite in terms of results on cells. Q. Hillegass study involved gene profiling and proteomics, bioplex proteins, cytokines released from peritoneal mesothelial cells exposed to	9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No.  BY MR. SMITH: Q. Okay. Look at Page 195 of your testimony in Brower. 194 and 195. A. Okay. 194 and 195? Q. Correct. A. Okay. Q. And I'm going to start on Line
9 10 11 12 13 14 15 16 17 18 19 20 21 22	Powder or Shower to Shower that we discussed earlier?  A. Not to my knowledge. Q. And you told me earlier that different types of asbestos affect human cells in different ways, correct?  A. Yes. Our studies have been with chrysotile and crocidolite asbestos, and amosite, which falls into the same category as crocidolite in terms of results on cells.  Q. Hillegass study involved gene profiling and proteomics, bioplex proteins, cytokines released from	9 10 11 12 13 14 15 16 17 18 19 20 21 22	results were reversible and not of a magnitude that one would expect protein to be increased.  BY MR. SMITH: Q. Okay. I asked you this question in Brower, do you recall that? MR. FROST: Objection. THE WITNESS: No.  BY MR. SMITH: Q. Okay. Look at Page 195 of your testimony in Brower. 194 and 195. A. Okay. 194 and 195? Q. Correct. A. Okay. Q. And I'm going to start on

108 (Pages 426 to 429)

	Page 430		Page 432
1	Q 10 or I'm going to	1	from talc, correct?
2	start on Line 8.	2	MR. FROST: Objection.
3	Can we go "Question: Can	3	THE WITNESS: I'm sorry.
4	we go back to the Hillegass study?	4	I'm
5	"Answer: Sure.	5	MR. FROST: Do you want to
6	"Question: There were	6	see the question or have it
7	additional tests done on asbestos that	7	read
8	were not done for talc in the study; is	8	THE WITNESS: Yeah. In your
9	that correct?	9	studies, that being
10	"Answer: As I remember it,	10	BY MR. SMITH:
11	yes.	11	Q. In your studies you were
12	"Okay. What additional	12	able to get additional information about
13	tests were done on asbestos that were not	13	whether asbestos was carcinogenic to
14	performed on tale?	14	cells, thought to be the origin of
15	"Answer: We used what was	15	ovarian cancer, that you failed to obtain
16	called a bioplex assay to examine	16	from tale, correct?
17	additional what are called	17	A. We weren't looking at
18	cytokines that were released from the	18	additional we weren't looking at
19	LP9 cell line after exposure to	19	whether asbestos was carcinogenic to
20	crocidolite.	20	cells in these studies. We were trying
21	"Question: So given the	21	to determine whether the gene profiling
22	fact that you didn't do the similar test	22	changes that we saw in the Shukla studies
23	on talc or the peritoneal mesothelial	23	were reflected by increased release of
24	cells, you can't tell me what additional	24	proteins from the cells.
	Page 431		Page 433
1	cytokines would have been released in	1	Q. Go to Page 196 of the Brower
2	that regard?"	2	testimony.
3	And there was an objection.	3	A. Mm-hmm. Okay. 196?
4	"The witness: Yeah. I	4	Q. Yes, ma'am.
5	can't"	5	A. Okay.
6	"Answer: I can't tell you	6	Q. Line 3.
7	the additional cytokines that were	7	A. Mm-hmm.
8	released by talc because we didn't look	8	Q. "Question: So you were able
9	at that."	9	to get additional information about
10	Is that your answer? Is	10	whether or not crocidolite asbestos was
10 11	Is that your answer? Is that correct?	11	whether or not crocidolite asbestos was carcinogenic or not compared to
10 11 12	Is that your answer? Is that correct?  MR. FROST: Objection.	11 12	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these
10 11 12 13	Is that your answer? Is that correct?  MR. FROST: Objection. THE WITNESS: Yes. If it	11 12 13	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?
10 11 12 13 14	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were	11 12 13 14	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."
10 11 12 13 14 15	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would	11 12 13 14 15	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes." Is that your answer? Is
10 11 12 13 14 15 16	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would have done the studies with talc,	11 12 13 14 15 16	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."  Is that your answer? Is that correct?
10 11 12 13 14 15 16 17	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would have done the studies with talc, but that was not the case.	11 12 13 14 15 16 17	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."  Is that your answer? Is that correct?  Is that statement correct
10 11 12 13 14 15 16 17 18	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would have done the studies with talc, but that was not the case.  BY MR. SMITH:	11 12 13 14 15 16 17 18	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."  Is that your answer? Is that correct?  Is that statement correct that you stated in Brower?
10 11 12 13 14 15 16 17 18	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would have done the studies with talc, but that was not the case.  BY MR. SMITH:  Q. In your study studies,	11 12 13 14 15 16 17 18 19	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."  Is that your answer? Is that correct?  Is that statement correct that you stated in Brower?  A. We were getting additional
10 11 12 13 14 15 16 17 18 19 20	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would have done the studies with talc, but that was not the case.  BY MR. SMITH:  Q. In your study studies, and that being Hillegass, you were able	11 12 13 14 15 16 17 18 19 20	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."  Is that your answer? Is that correct?  Is that statement correct that you stated in Brower?  A. We were getting additional information. Certainly from the study,
10 11 12 13 14 15 16 17 18 19 20 21	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would have done the studies with talc, but that was not the case.  BY MR. SMITH:  Q. In your study studies, and that being Hillegass, you were able to get additional information about	11 12 13 14 15 16 17 18 19 20 21	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."  Is that your answer? Is that correct?  Is that statement correct that you stated in Brower?  A. We were getting additional information. Certainly from the study, but the way your sentence is worded, your
10 11 12 13 14 15 16 17 18 19 20 21 22	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would have done the studies with talc, but that was not the case.  BY MR. SMITH:  Q. In your study studies, and that being Hillegass, you were able to get additional information about whether asbestos was carcinogenic to	11 12 13 14 15 16 17 18 19 20 21 22	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."  Is that your answer? Is that correct?  Is that statement correct that you stated in Brower?  A. We were getting additional information. Certainly from the study, but the way your sentence is worded, your question is worded, about whether or not
10 11 12 13 14 15 16 17 18 19 20 21	Is that your answer? Is that correct?  MR. FROST: Objection.  THE WITNESS: Yes. If it had been indicated that there were elevations like asbestos, we would have done the studies with talc, but that was not the case.  BY MR. SMITH:  Q. In your study studies, and that being Hillegass, you were able to get additional information about	11 12 13 14 15 16 17 18 19 20 21	whether or not crocidolite asbestos was carcinogenic or not compared to neomesothelial cells by doing these additional studies?  "Answer: In general, yes."  Is that your answer? Is that correct?  Is that statement correct that you stated in Brower?  A. We were getting additional information. Certainly from the study, but the way your sentence is worded, your

		1	
	Page 434		Page 436
1	whereby or would be gained by	1	Q. I think we attached it as an
2	information on these additional studies.	2	exhibit to the deposition.
3	MR. SMITH: I'm going to	3	A. All right. Mm-hmm. If I
4	object as nonresponsive.	4	can find it in the pile here. Okay.
5	BY MR. SMITH:	5	Q. When did you draft your
6	Q. I'm going to read the	6	report and reach your conclusions? It's
7	question and answer again.	7	dated February 25th, 2019. I think you
8	"So you weren't able to get	8	said some time in December or January
9	additional information about whether or	9	2018, 2019. Would that be correct?
10	not crocidolite asbestos was carcinogenic	10	A. Sometime in that realm, yes.
11	or not compared to neomesothelial cells	11	Q. What methodology did you use
12	by doing these additional studies?" And	12	in arriving at your opinions in this
13	we're talking about Hillegass. And your	13	case?
14	answer was: "In general, yes."	14	A. I used the same methodology
15	Is that true, is that a true	15	that I would have in our researching any
16	statement?	16	scientific review.
17	MR. FROST: Objection.	17	Q. And what is that?
18	THE WITNESS: Yeah. Let me	18	A. Search of the peer-reviewed
19	emphasize again that the	19	literature on the topic. I was also
20	additional information we were	20	asked to comment on two expert reports.
21	getting was whether genes that we	21	And in that case, I looked at each
22	saw in Shukla resulted in protein	22	statement, each reference, and then I did
23	secretion by mesothelial cells	23	a literature review of my own to pull up
24	after exposure to crocidolite	24	other possibly relevant papers.
	Page 435		Page 437
1	asbestos.	1	So my methodology was the
2	This is a long leap in terms	2	same as I would have done in this case in
3	of determining whether or not	3	review of scientific papers submitted by
4	crocidolite asbestos is	4	others to journals.
5	carcinogenic to peritoneal	5	I'm missing my report here.
6	mesothelial cells. We weren't	6	Q. Can you how did you
7	looking at that in these studies.	7	compile the literature or compile the
8	BY MR. SMITH:	8	literature search that you did in this
9	Q. Can I rely on your answer in	9	area?
10	the Brower case?	10	A. I did a PubMed search.
11	MR. FROST: Objection.	11	Q. Of what?
12	THE WITNESS: I'm qualifying	12	A. I looked at asbestos and
13	it. I say in general.	13	ovarian cancer. I put in talc and
14	Again, I'm trying to make it	14	ovarian cancer. I looked at all the
15	clear that we were looking at	15	references that were cited by
16	proteins that were released from	16	Drs. Zelikoff and Saed and read those
17	these cells. Are there links	17	papers, and then I looked at statements
18	between these and cancer-causing	18	in those papers and how they were
19	effects? Not necessarily. And	19	referenced. So I had an additional
20	that's my answer.	20	volume of information.
21	BY MR. SMITH:	21	Q. You said that you used the
22	Q. All right. I would like to	22	methodology that you used in your
23	talk to you about your report.	23	peer-reviewed literature; is that
24	A. Okay.	24	correct?

110 (Pages 434 to 437)

		1	
	Page 438		Page 440
1	A. I used the peer-review	1	Q. Do the Shukla and Hillegass
2	process in order to compile the work. I	2	studies play a major role in the basis of
3	cited work that I'd done in peer-reviewed	3	your opinions in this case?
4	journals. And I also thank you.	4	MR. FROST: Objection.
5	And I also looked at the	5	THE WITNESS: They add basis
6	IARC two reports, which are not peer	6	to the studies that I reviewed.
7	reviewed.	7	So I would include these as well
8	Q. The IARC monograph is not	8	as the animal studies and the
9	peer-reviewed?	9	epidemiology and other mechanistic
10	A. No, it's not. It's not in a	10	studies as related to my final
11	peer-reviewed database.	11	opinions.
12	Q. Are your opinions in this	12	BY MR. SMITH:
13	case peer reviewed? Is your report peer	13	Q. Did you examine all the
14	reviewed?	14	available data on cells responsible for
15	A. My report is based upon my	15	ovarian cancer and its interaction with
16	review of peer-reviewed data.	16	cosmetic-grade talc, that being the type
17	Q. Is your report in this case	17	that's in Baby Powder and Shower to
18	a peer-reviewed study?	18	Shower?
19	A. It's not. It's an opinion,	19	A. Could you state that again.
20	or set of opinions.	20	I'm sorry.
21	Q. In your opinion and we'll	21	Q. Did you explain all the
22	look at it in a minute. I don't see	22	available data on cells responsible for
23	anywhere in your and I could be wrong,	23	ovarian cancer and its interaction with
24	like I missed something before earlier,	24	cosmetic-grade talc, that being the type
	Page 439		Page 441
1	but I didn't see anywhere in your report	1	that's in Baby Powder and Shower to
2	where you state that you do not believe	2	Shower?
3	that talc there's no statement that I	3	A. If I pulled the information
4	recall that you do not hold the opinion	4	up on PubMed, if there was research out
5	that talc does not cause ovarian cancer.	5	there, I would have pulled it up. I
6	MR. FROST: Objection.	6	don't recall any studies in vitro that
7	BY MR. SMITH:	7	focused on cosmetic talc with the
8	Q. Do you recall that being	8	exception of Dr. Saed's.
9	stated in your report?	9	Q. Did you examine all the
10	A. I don't. But I'd have to go	10	available data on cells responsible for
11	through it.	11	ovarian cancer and its interaction of the
12	Q. Are all your opinions in	12	types of asbestos found in Baby Powder
13	this case contained in that report?	13	and Shower to Shower?
14	A. Yes. I'm wondering whether	14	A. That's not a simple yes or
15	it's in the summary or the end of the	15	no question. Again, if there were papers
16	reports.	16	that were in the peer-reviewed scientific
17	Q. We'll go through your bullet	17	literature on talcs, I would have gotten
18	points	18	those. Whether they were specifically
19	A. Okay.	19	regarding cosmetic tales or industrial
20	Q and we'll come back to	20	tales or pharmaceutical-grade tales, that
21	that.	21	would have been in the papers themselves.
22	A. Okay. It might be in there.	22	Q. Let's go to your report.
23	I just don't know where it would be	23	A. Okay.
24	stated in terms of that precise sentence.	24	Q. I'd like to go to Bullet
24	stated in terms of that precise sentence.		(·

		1	
	Page 442		Page 444
1	Point 1, summary of opinions. Bullet	1	reactions.
2	Point 1: "Cosmetic talc particles and	2	Q. And analyzing whether a
3	non-asbestos cleavage fragments are	3	sample of materials is talc, asbestos, or
4	different chemically, physically, and	4	talc with asbestos, you leave that to
5	structurally from amphibole asbestos	5	mineralogists, as we discussed that
6	types, crocidolite and amosite."	6	earlier, correct?
7	You mentioned cosmetic talc	7	A. Yes. I work with reference
8	particles, but you have never studied	8	samples of materials.
9	cosmetic talc particles; is that correct?	9	Q. And the same for determining
10	MR. FROST: Objection.	10	if a mineral is asbestos or asbestiform,
11	THE WITNESS: Correct. But	11	correct?
12	they are I again reviewed the	12	MR. FROST: Objection.
13	IARC report and reports by	13	THE WITNESS: Yes. The
14	Zazenski, et al., characterizing	14	mineralogists I collaborate with
15	cosmetic tales, and they are	15	characterize these materials.
16	that's where this statement came	16	BY MR. SMITH:
17	from.	17	
18	BY MR. SMITH:	18	<ul><li>Q. And you're not a geologist?</li><li>A. That's correct.</li></ul>
19		19	
	Q. And you mentioned		Q. And not a materials analyst,
20	crocidolite and amosite asbestos,	20	correct?
21	correct?	21	A. Correct.
22	A. Yes.	22	Q. And you are not an expert in
23	Q. And we mentioned earlier	23	determining the flexibility or rigidity
24	this is not the type of asbestos that's	24	of asbestos or cleavage fragments,
	Page 443		Page 445
1	been found in Baby Powder and Shower to	1	correct?
2	Shower; is that correct?	2	MR. FROST: Objection.
3	MR. FROST: Objection.	3	THE WITNESS: I have not
4	THE WITNESS: Again, you're	4	used methods in my lab measure
5	assuming that other asbestos types	5	particle flexibility directly.
6	have been found in these	6	BY MR. SMITH:
7	materials, and I am unaware of	7	Q. Let's go to Bullet Point 2.
8	that data.	8	"Because of these different properties,
9	BY MR. SMITH:	9	cosmetic talc particles and non-asbestos
10	Q. Okay. Bullet Point 1, you	10	cleavage fragments are unlikely to reach
11	mention the different chemical, physical,	11	or be retained at sites of development of
12	and structural differences of cosmetic	12	mesothelioma or ovarian cancers."
13	tale and crocidolite asbestos and amosite	13	You stated that you never
14	asbestos, correct?	14	studied cosmetic talc particles or
15	MR. FROST: Objection.	15	cleavage fragments that have been
16	THE WITNESS: Yes.	16	
17	BY MR. SMITH:	17	reported in Baby Powder or Shower to
18		18	Shower, correct?
	Q. And you stated you are not a		MR. FROST: Objection.
19	mineralogist, correct?	19	THE WITNESS: I myself
20	A. No, but I have interacted	20	haven't studied them. But others
21	with mesothelial cell, let's say,	21	have, and their properties have
22	biologists and geologists who have	22	been documented by others,
23	emphasized in their experiments or	23	including mineralogists.
24	characterization that they're different	24	BY MR. SMITH:

112 (Pages 442 to 445)

		1	
	Page 446		Page 448
1	Q. What is the basis of that	1	development of disease.
2	statement?	2	BY MR. SMITH:
3	A. The basis of the statement	3	Q. And you also stated earlier
4	is twofold. Cosmetic talc particles as	4	that you had not performed any studies on
5	defined in IARC are platelike, large	5	whether cleavage fragments can reach the
6	platelike discs that would not be	6	area of the lung where where
7	deposited as would amphibole asbestos	7	mesothelioma is induced and developed.
8	types at the pleura. They would not make	8	We discussed that earlier.
9	it out to the pleura because of their	9	MR. FROST: Objection.
10	size. And this is true of non-asbestos	10	THE WITNESS: That's true,
11	cleavage fragments as well. Because	11	but other individuals have shown
12	experiments by Dr. Wiley have indicated	12	that cleavage fragments of a
13	that these cleavage fragments break	13	variety of types are not
14	perpendicular to the fiber surface. So	14	mesothelioma-genic.
15	they don't form long, thin fibers.	15	BY MR. SMITH:
16	And cleavage fragments of a	16	Q. And what basis do you have
17	size that are pathogenic; that is, 5 to	17	to say that cosmetic-grade talc particles
18	10 microns are rare, if at all existent	18	cannot be retained by the ovaries?
19	in diameters that would allow them to be	19	MR. FROST: Objection.
20	taken out to the pleura by transfer or	20	THE WITNESS: I am saying
21	retained in the pleura.	21	that there's no scientifically
22	Q. You told me earlier in the	22	plausible pathway where they would
23	depo that you had not studied how	23	be translocated in a retrograde
24	tremolite, anthophyllite, and actinolite	24	fashion from the perineum to the
	Page 447		Page 449
1	asbestos reached the areas of the lungs	1	ovary.
2	where mesothelioma is induced and	2	BY MR. SMITH:
3	developed, and you could not make a	3	Q. Well, you state in your
4	strict analogy to these type of asbestos	4	in in the bullet point that fragments
5	from your study of other types of	5	are unlikely to be reached reach or be
6	asbestos. We talked about that earlier	6	retained by these sites of development of
7	in the deposition.	7	mesotheliomas or ovarian cancers. And
8	MR. FROST: Objection.	8	I'm going to the or part. Or retained.
9	THE WITNESS: We did. But I	9	What basis do you have to
10	want to emphasize that if these	10	say that cosmetic-grade talc particles
11	materials it's known that	11	cannot be retained by the ovaries?
12	anthophyllite and tremolite are	12	MR. FROST: Objection.
13	thicker, blunter fibers than the	13	THE WITNESS: What I'm
14	needlelike amphibole asbestos	14	saying is that there has been no
15	types and, therefore, their	15	information suggesting that they
16	propensity to either reach or be	16	get there to cause disease.
17	retained at sites of development	17	BY MR. SMITH:
18	of mesothelioma would be related	18	Q. Have you not seen
19	to their surface features, as well	19	pathological studies of and we've gone
20	as their physical features and,	20	through a bunch of them, where they have
21	therefore, them being blunt and	21	found tale in human ovarian tissue?
			MD EDOCE OI' '
22	thick, like cleavage fragments,	22	MR. FROST: Objection.
22 23	they would be unlikely to reach or	23	THE WITNESS: Yes, and I'd
22		1	<u> </u>

113 (Pages 446 to 449)

	Page 450		Page 452
1	committee found that talc degrades	1	particles in general showing that
2	in a period of about eight years.	2	their half life in the human body
3	So my point here is that	3	is an approximately eight-year
4	we're talking about mesothelioma	4	time span for a platelike talc.
5	in this case, in my second bullet.	5	BY MR. SMITH:
6	And that they would not be	6	Q. But that's talking about
7	retained for periods of time	7	dissolution, not about retention.
8	sufficient enough for the	8	A. But retention and
9	development of mesothelioma. We	9	dissolution are the same thing. If
10	don't know what the latency period	10	something dissolves, it can't be
11	is of ovarian cancer.	11	retained. It's one of the factors that's
12	But the same thing is true,	12	very important.
13	that the amphibole asbestos types	13	Q. Do you know if any of those
14	that I've studied, crocidolite and	14	studies on bio durability have discussed
15	amosite, are durable in lung for	15	or looked at talc in ovarian tissue to
16	periods of time of decades, as	16	determine how long it survives in ovarian
17	opposed to years with something	17	tissue?
18	such as talc.	18	A. No. Because the studies
19	BY MR. SMITH:	19	that have shown it in ovarian tissues are
20	Q. You understand about talc	20	for probably decades since these
21	exposure, we're talking about chronic	21	exposures. We have no idea. And the way
22	talc exposure over decades. Do you	22	to address that question wouldn't be in
23	understand that that's what we are	23	looking at human ovarian material.
24	talking about?	24	Q. You have not performed any
	5 451		7. 452
	Page 451		Page 453
1	A. You may be talking about it,	1	studies on whether or not asbestos
2	but I don't think there's evidence again	2	cleavage fragments can cause ovarian
3	showing that chronic talc exposure leads	3	cancer, correct?
4	to migration to the ovary or that it's	4	MR. FROST: Objection.
5	associated with with disease.	5	THE WITNESS: I have not.
6	Q. I'm just questioning your	6	BY MR. SMITH:
7	opinion about fragments are unlikely,	7	Q. Third bullet point. "Talc
8	non-asbestos cleavage fragments and	8	and non-asbestos cleavage fragments are
9	cosmetic talc particles, to be retained	9	not reactive with cells and their
10	at the sites of development of ovarian	10	effective repair pathways occur. Because
11	cancer.	11	they are distinct in chemistry and other
	And I 1 1	1 0	factoring from sales at a City of 1
12	And I want to know what your	12	features from asbestos fibers, they do
12 13	basis of opinion that cosmetic-grade talc	13	not have the same potential to cause the
12 13 14	basis of opinion that cosmetic-grade talc which you've never tested cannot be	13 14	not have the same potential to cause the abnormal cell responses that are integral
12 13 14 15	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries.	13 14 15	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."
12 13 14 15 16	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries.  MR. FROST: Objection.	13 14 15 16	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."  MR. FROST: Objection.
12 13 14 15 16 17	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries.  MR. FROST: Objection. BY MR. SMITH:	13 14 15 16 17	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."  MR. FROST: Objection. BY MR. SMITH:
12 13 14 15 16 17 18	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries. MR. FROST: Objection. BY MR. SMITH: Q. When we have studies that	13 14 15 16 17 18	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."  MR. FROST: Objection.  BY MR. SMITH:  Q. Is that your third bullet
12 13 14 15 16 17 18 19	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries.  MR. FROST: Objection.  BY MR. SMITH:  Q. When we have studies that show talc in human ovarian tissue and	13 14 15 16 17 18 19	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."  MR. FROST: Objection.  BY MR. SMITH:  Q. Is that your third bullet point in your summary of opinions?
12 13 14 15 16 17 18 19 20	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries.  MR. FROST: Objection.  BY MR. SMITH:  Q. When we have studies that show talc in human ovarian tissue and and human cancer tissue.	13 14 15 16 17 18 19 20	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."  MR. FROST: Objection.  BY MR. SMITH:  Q. Is that your third bullet point in your summary of opinions?  A. Yes.
12 13 14 15 16 17 18 19 20 21	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries.  MR. FROST: Objection.  BY MR. SMITH:  Q. When we have studies that show talc in human ovarian tissue and and human cancer tissue.  MR. FROST: Objection.	13 14 15 16 17 18 19 20 21	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."  MR. FROST: Objection.  BY MR. SMITH:  Q. Is that your third bullet point in your summary of opinions?  A. Yes.  Q. Okay. Well, talc not being
12 13 14 15 16 17 18 19 20 21 22	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries.  MR. FROST: Objection.  BY MR. SMITH:  Q. When we have studies that show talc in human ovarian tissue and and human cancer tissue.  MR. FROST: Objection.  THE WITNESS: So what I'm	13 14 15 16 17 18 19 20 21 22	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."  MR. FROST: Objection.  BY MR. SMITH:  Q. Is that your third bullet point in your summary of opinions?  A. Yes.  Q. Okay. Well, talc not being reactive with cells, we showed in Shukla
12 13 14 15 16 17 18 19 20 21	basis of opinion that cosmetic-grade talc which you've never tested cannot be retained by the ovaries.  MR. FROST: Objection.  BY MR. SMITH:  Q. When we have studies that show talc in human ovarian tissue and and human cancer tissue.  MR. FROST: Objection.	13 14 15 16 17 18 19 20 21	not have the same potential to cause the abnormal cell responses that are integral to the development of cancers."  MR. FROST: Objection.  BY MR. SMITH:  Q. Is that your third bullet point in your summary of opinions?  A. Yes.  Q. Okay. Well, talc not being

	Page 454		Page 456
1	at eight hours, right?	1	theme is primarily the national
2	A. And what I'm saying is that	2	institutes that conducts research.
3	any particle would have caused those	3	And this was a road plan for
4	changes. That was inert. And the 30	4	research.
5	changes that we observed as opposed to	5	BY MR. SMITH:
6	hundreds of genes with asbestos was not	6	Q. Well, they talk about the
7	significantly different than the	7	NIOSH REL, correct, and exposure to EMPs
8	responses of these cells to titanium	8	that meet the definition of fibrous talc
9	dioxide or glass.	9	in this in this document; is that
10	Q. And we went over, titanium	10	correct?
11	dioxide and glass did not alter any	11	MR. FROST: Objection.
12	genes, correct?	12	THE WITNESS: I you would
13	A. It did not alter any genes	13	have to show me where that's
14	significantly. That's correct.	14	specifically. I don't remember
15	Q. In regards to cleavage	15	fibrous talc being used as a term
16	fragments, you stated you stated	16	in this document.
17	earlier you never studied anthophyllite	17	BY MR. SMITH:
18	or actinolite cleavage fragments, or	18	Q. Look on Page 33. Look at
19	tremolite	19	2.7.2, clarification of the current NIOSH
20	MR. FROST: Objection.	20	· · · · · · · · · · · · · · · · · · ·
21	BY MR. SMITH:	21	REL. And it says at the top right column, "However, as the following
22	Q besides the one study in	22	_
23	New York?		clarified REL makes clear, particles that
24	A. I have studied survival and	23 24	meet the specified dimensional criteria remain countable under the REL for the
24	A. I have studied survivar and	2 <del>4</del>	remain countable under the REL for the
	Page 455		Page 457
			rage 157
1	toxicity of three samples of New York	1	reasons stated above, even if they're
1 2	toxicity of three samples of New York State talc containing non-asbestiform	1 2	
			reasons stated above, even if they're
2	State talc containing non-asbestiform	2	reasons stated above, even if they're derived from non-asbestiform analogs of
2	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.	2 3	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use
2 3 4	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying	2 3 4	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the
2 3 4 5	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?	2 3 4 5	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."
2 3 4 5 6	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.	2 3 4 5 6	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH
2 3 4 5 6 7	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH	2 3 4 5 6 7	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos
2 3 4 5 6 7 8	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we	2 3 4 5 6 7 8	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in
2 3 4 5 6 7 8 9 10	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was	2 3 4 5 6 7 8	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced
2 3 4 5 6 7 8 9	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that	2 3 4 5 6 7 8 9	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.
2 3 4 5 6 7 8 9 10	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?	2 3 4 5 6 7 8 9 10	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a
2 3 4 5 6 7 8 9 10 11 12	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the	2 3 4 5 6 7 8 9 10 11	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that
2 3 4 5 6 7 8 9 10 11 12 13	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety	2 3 4 5 6 7 8 9 10 11 12 13	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest
2 3 4 5 6 7 8 9 10 11 12 13 14	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety and Health, yes.	2 3 4 5 6 7 8 9 10 11 12 13	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest feasible concentration.
2 3 4 5 6 7 8 9 10 11 12 13 14 15	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety and Health, yes.  MR. FROST: Talking about	2 3 4 5 6 7 8 9 10 11 12 13 14	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest feasible concentration.  "NIOSH REL for airborne
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety and Health, yes.  MR. FROST: Talking about the roadmap?	2 3 4 5 6 7 8 9 10 11 12 13 14 15	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest feasible concentration.  "NIOSH REL for airborne asbestos fibers and elongated mineral
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety and Health, yes.  MR. FROST: Talking about the roadmap?  THE WITNESS: I got it here.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest feasible concentration.  "NIOSH REL for airborne asbestos fibers and elongated mineral particles is .1 countable EMP from one or more covered minerals per cubic
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety and Health, yes.  MR. FROST: Talking about the roadmap?  THE WITNESS: I got it here.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest feasible concentration.  "NIOSH REL for airborne asbestos fibers and elongated mineral particles is .1 countable EMP from one or
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety and Health, yes.  MR. FROST: Talking about the roadmap?  THE WITNESS: I got it here.  BY MR. SMITH:  Q. NIOSH regulates exposures to	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest feasible concentration.  "NIOSH REL for airborne asbestos fibers and elongated mineral particles is .1 countable EMP from one or more covered minerals per cubic centimeter averaged over 100 minutes."  And it talks about a
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety and Health, yes.  MR. FROST: Talking about the roadmap?  THE WITNESS: I got it here. BY MR. SMITH:  Q. NIOSH regulates exposures to EMPs that meet the definition which may	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest feasible concentration.  "NIOSH REL for airborne asbestos fibers and elongated mineral particles is .1 countable EMP from one or more covered minerals per cubic centimeter averaged over 100 minutes."  And it talks about a countable elongated mineral particle,
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	State talc containing non-asbestiform tremolite and non-asbestos anthophyllite.  Q. And that was studying industrial-grade talc, correct?  A. That is correct.  Q. And we discussed what NIOSH was earlier. Do you recall? I think we went through what NIOSH was. It was under OSHA. Do you recall that testimony?  A. NIOSH stands for the National Institute of Occupational Safety and Health, yes.  MR. FROST: Talking about the roadmap?  THE WITNESS: I got it here.  BY MR. SMITH:  Q. NIOSH regulates exposures to EMPs that meet the definition which may include fibrous talc; is that correct?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	reasons stated above, even if they're derived from non-asbestiform analogs of the asbestiform minerals. With the use of terms defined in this roadmap, the NIOSH REL is now clarified as follows."  And it talks about, "NIOSH has determined that exposure to asbestos fibers can cause cancer and asbestosis in humans and recommends exposure be reduced to the lowest feasible concentration.  NIOSH has designated asbestos to be a potential carcinogen and recommends that exposures be reduced to the lowest feasible concentration.  "NIOSH REL for airborne asbestos fibers and elongated mineral particles is .1 countable EMP from one or more covered minerals per cubic centimeter averaged over 100 minutes."  And it talks about a

	Page 458		Page 460
1	_	1	
2	mineral having the crystal structure and	1	Sciences. And that questioned statements such as this and
3	elemental composition of one of the	2	
	asbestos varieties (chrysotile),	3	clarified them in the response of
4	riebeckite asbestos (crocidolite)", I	4	that committee.
5	can't pronounce all of these. All the	5	So there I would disagree
6	different asbestos "or one of their	6	that NIOSH and in fact, I have
7	non-asbestiform analogs and the amphibole	7	been convinced through the decades
8	minerals contained in the mineral series,	8	that OSHA and NIOSH don't regulate
9	the tremolite mineral series" and I	9	non-asbestiform analogs.
10	can't pronounce those names.	10	BY MR. SMITH:
11	Is that correct?	11	Q. So you're telling me, in
12	MR. FROST: Objection.	12	your opinion, you do not believe that
13	THE WITNESS: I'm not sure	13	non-asbestos cleavage fragments are
14	what this is saying. It says	14	subject to REL the count for REL
15	clarification it's under a	15	regarding the exposure limits to human
16	section, "Clarification of the	16	workers to non-asbestiform cleavage
17	current exposure limit." They do	17	fragments? You don't believe that that
18	state on Page 32 that they suggest	18	exists today?
19	that "Studies suggest that	19	MR. FROST: Objection.
20	non-asbestiform amphiboles might	20	THE WITNESS: I'm sorry, the
21	post different risks than	21	question is, what exists?
22	asbestos," and that was a theme	22	BY MR. SMITH:
23	throughout this document.	23	Q. A time-weighted limit called
24	BY MR. SMITH:	24	an REL on exposures of U.S. workers to
			an rest on exposures of e.g. workers to
	Page 459		Page 461
1	Q. Absolutely. But they also	1	these cleavage fragments
2	regulate do you understand that NIOSH	2	MR. FROST: Objection.
3	and REL is a time-weighted average	3	BY MR. SMITH:
4	exposure to a worker by a mineral? Do	4	Q by NIOSH?
5	you understand that?	5	A. I don't know what those are.
6	MR. FROST: Objection.	6	And they're not stated here. So I can't
7	THE WITNESS: I understand	7	give you a NIOSH REL for non-asbestos
8	it, but I	8	cleavage fragments.
9	BY MR. SMITH:	9	Q. You can't tell me whether
10	Q. But my question.	10	the NIOSH whether you count a worker's
11	A do not	11	exposure to non-asbestos cleavage
12	Q. Hold on. My question you	12	fragments goes to the overall exposure
13	understand that.	13	of a worker for the NIOSH REL or not?
14	My question is, do you	14	MR. FROST: Objection.
	understand that non-asbestiform cleavage	15	THE WITNESS: That is not my
15			1112111.200. That is not my
15 16	•	16	area of expertise. No. I can't
16	fragments are regulated under the NIOSH	16 17	area of expertise. No, I can't tell you that And I can just
16 17	fragments are regulated under the NIOSH REL for exposures to human workers?	17	tell you that. And I can just
16 17 18	fragments are regulated under the NIOSH REL for exposures to human workers?  MR. FROST: Objection.	17 18	tell you that. And I can just tell you that biologically, as is
16 17 18 19	fragments are regulated under the NIOSH REL for exposures to human workers? MR. FROST: Objection. THE WITNESS: No. I don't	17 18 19	tell you that. And I can just tell you that biologically, as is stated in this report, it's stated
16 17 18 19 20	fragments are regulated under the NIOSH REL for exposures to human workers?  MR. FROST: Objection.  THE WITNESS: No. I don't think that's correct. As a matter	17 18 19 20	tell you that. And I can just tell you that biologically, as is stated in this report, it's stated that these cleavage fragments
16 17 18 19 20 21	fragments are regulated under the NIOSH REL for exposures to human workers? MR. FROST: Objection. THE WITNESS: No. I don't think that's correct. As a matter of fact after this report, there	17 18 19 20 21	tell you that. And I can just tell you that biologically, as is stated in this report, it's stated that these cleavage fragments might pose different risks or
16 17 18 19 20 21	fragments are regulated under the NIOSH REL for exposures to human workers? MR. FROST: Objection. THE WITNESS: No. I don't think that's correct. As a matter of fact after this report, there was another report to address the	17 18 19 20 21 22	tell you that. And I can just tell you that biologically, as is stated in this report, it's stated that these cleavage fragments might pose different risks or lesser risks than their asbestos
16 17 18 19 20 21	fragments are regulated under the NIOSH REL for exposures to human workers? MR. FROST: Objection. THE WITNESS: No. I don't think that's correct. As a matter of fact after this report, there	17 18 19 20 21	tell you that. And I can just tell you that biologically, as is stated in this report, it's stated that these cleavage fragments might pose different risks or

	D 160		D 464
	Page 462		Page 464
1	Q. It doesn't say no risk. In	1	health issues by assessing health risk
2	fact, they're regulated per the NIOSH	2	and benefits, often through the prism of
3	document that I just showed you.	3	the human and social sciences.
4	MR. FROST: Objection.	4	"Its monitoring, diligence,
5	THE WITNESS: I I would	5	and surveillance work provides input for
6	have to see that, whether that	6	risk assessment. ANSES work fully
7	still exists. That was a subject	7	addresses all types of risk, chemical,
8	of controversy, not only in this	8	biological, physical, et cetera, to which
9	document, but in a subsequent	9	a person may be subjected intentionally
10	document that looked at the	10	or otherwise at all ages and stages of
11	deliberations of this committee.	11	life, including through exposure at work,
12	BY MR. SMITH:	12	while traveling, while engaging in
13	Q. The French government	13	leisure activities or via their diet."
14	doesn't agree with you on your assessment	14	Do you see that?
15	of the health risk of cleavage fragments,	15	A. And I state that I have
16	do they?	16	never heard of ANSES prior to this
17	MR. FROST: Objection.	17	litigation.
18	THE WITNESS: I think French	18	Q. Okay. And if you look at
19	scientists agree with me.	19	the second page, it talks about the
20	BY MR. SMITH:	20	collaborative, impartial expert
21		21	assessment that they do. And then I want
22	Q. You have been shown the	22	•
23	ANSES articles and the publication, have		to
23 24	you not, and the official opinion of the	23	A. I've interacted with many
24	French agency for food, environmental,	24	scientists, including the leading
	Page 463		Page 465
			1490 103
1	and occupational health and safety?	1	scientist in France at Inserm and never
1 2	and occupational health and safety?  A. That is not their	1 2	scientist in France at Inserm and never
			scientist in France at Inserm and never have heard of this society or whatever it
2	A. That is not their national Inserm is their national	2	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether
2	A. That is not their	2 3	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.
2 3 4	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is.	2 3 4	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for
2 3 4 5	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at	2 3 4 5	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit
2 3 4 5 6 7	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is.  Q. Let's look at page at document Exhibit 43.	2 3 4 5 6 7	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)
2 3 4 5 6 7 8	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for	2 3 4 5 6	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.) BY MR. SMITH:
2 3 4 5 6 7 8 9	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit	2 3 4 5 6 7 8	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's
2 3 4 5 6 7 8 9	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.)	2 3 4 5 6 7 8 9	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion.
2 3 4 5 6 7 8 9 10	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH:	2 3 4 5 6 7 8 9 10	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for
2 3 4 5 6 7 8 9 10 11	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food,	2 3 4 5 6 7 8 9 10 11	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational
2 3 4 5 6 7 8 9 10 11 12 13	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health	2 3 4 5 6 7 8 9 10 11 12 13	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects
2 3 4 5 6 7 8 9 10 11 12 13	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on	2 3 4 5 6 7 8 9 10 11 12 13 14	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from
2 3 4 5 6 7 8 9 10 11 12 13 14	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative	2 3 4 5 6 7 8 9 10 11 12 13 14 15	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the French Ministries of Health, Agriculture,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes independent and pluralistic scientific
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the French Ministries of Health, Agriculture, Environment, Labor and Consumer Affairs.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes independent and pluralistic scientific expert assessments. ANSES ensures
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the French Ministries of Health, Agriculture, Environment, Labor and Consumer Affairs. ANSES undertakes monitoring, expert	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes independent and pluralistic scientific expert assessments. ANSES ensures environmental, occupational and food
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the French Ministries of Health, Agriculture, Environment, Labor and Consumer Affairs. ANSES undertakes monitoring, expert assessment, research, and reference	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes independent and pluralistic scientific expert assessments. ANSES ensures environmental, occupational and food safety as well as assessing the potential
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the French Ministries of Health, Agriculture, Environment, Labor and Consumer Affairs. ANSES undertakes monitoring, expert assessment, research, and reference activities in a broad range of topics	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes independent and pluralistic scientific expert assessments. ANSES ensures environmental, occupational and food safety as well as assessing the potential health risks they may entail. It also
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the French Ministries of Health, Agriculture, Environment, Labor and Consumer Affairs. ANSES undertakes monitoring, expert assessment, research, and reference activities in a broad range of topics that encompass human health, animal	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes independent and pluralistic scientific expert assessments. ANSES ensures environmental, occupational and food safety as well as assessing the potential health risks they may entail. It also contributes to the protection of the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the French Ministries of Health, Agriculture, Environment, Labor and Consumer Affairs. ANSES undertakes monitoring, expert assessment, research, and reference activities in a broad range of topics that encompass human health, animal health and wellbeing, and plant health.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes independent and pluralistic scientific expert assessments. ANSES ensures environmental, occupational and food safety as well as assessing the potential health risks they may entail. It also contributes to the protection of the health and welfare of animals, the
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	A. That is not their national Inserm is their national research on fibers and particles. I have no idea what ANSES is. Q. Let's look at page at document Exhibit 43. (Document marked for identification as Exhibit Mossman-43.) BY MR. SMITH: Q. "The French Agency For Food, Environmental, and Occupational Health and Safety," A-N-S-E-S, "was created on July 1st, 2010. It is an administrative public establishment accountable to the French Ministries of Health, Agriculture, Environment, Labor and Consumer Affairs. ANSES undertakes monitoring, expert assessment, research, and reference activities in a broad range of topics that encompass human health, animal	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	scientist in France at Inserm and never have heard of this society or whatever it is, an agency, and would question whether it's a research agency.  (Document marked for identification as Exhibit Mossman-44.)  BY MR. SMITH:  Q. This is Exhibit 44. It's the Director General of ANSES opinion. It's an opinion of the French agency for food, environmental and occupational health and safety, on health effects identified of cleavage fragments from of amphiboles from quarried minerals.  It says, "ANSES undertakes independent and pluralistic scientific expert assessments. ANSES ensures environmental, occupational and food safety as well as assessing the potential health risks they may entail. It also contributes to the protection of the

evaluation of the nutritional characteristics of food. It provides the	1	document before?
characteristics of food. It provides the		
	2	MR. FROST: Objection.
competent authorities with all necessary	3	THE WITNESS: I have.
information concerning these risks as	4	Am I allowed to comment on
well as the requisite expertise and	5	it?
scientific and technical support for	6	MR. FROST: My objection was
* *		to reading it.
		THE WITNESS: Okay.
		BY MR. SMITH:
	l	Q. And then if you go onto the
	· ·	page let's see. Seven pages in. It
•		says, "To sum up, the CES concludes that:
		"In the current state of
	1	knowledge concerning their health
· · · · · · · · · · · · · · · · · · ·	l	effects, cleavage fragments of
	l	non-asbestos amphiboles, actinolite,
		anthophyllite, tremolite, grunerite and
		riebeckite were meet" "meeting the
	l	WHO's dimensional criteria for fibers
	l	
	l	should not be distinguished from their
•		asbestiform counterparts."
•		And do you see that written there?
	1	
the request included the following	24	Do you agree with that
Page 467		Page 469
points:	1	assessment by them?
"To review toxicological and	2	A. Can you point to the
epidemiological evidence relating to	3	MR. FROST: Objection.
cleavage fragments of minerals with	4	THE WITNESS: statement
non-asbestiform profiles: Actinolite,	5	on Page 7 that you're talking
anthophyllite, tremolite, grunerite,	6	about?
riebeckite. What conclusions can be	7	There is no reason to make a
reached about their effects on health?	8	distinction? Is that what you're
"2, what current data are	9	talking about?
available regarding the specific	10	BY MR. SMITH:
exposures to cleavage fragments and	11	Q. That statement right here.
minerals cited above?	12	It's, to sum up, the CES concludes that.
"3, are there routine	13	A. First of all, I don't know
analytics methods that can be implemented	14	what the CES is. This report was signed
by laboratories accredited, capable of	15	by one individual. I have never heard of
distinguishing the fibers?" And and	16	this review or this assignment through a
they list the fibers there.	17	scientific body.
And it says, "On the	18	And I also want to emphasize
conclusion of the expert appraisal,	19	that the references that are cited, if
recommendations may be proposed	20	you look at Page 12 and 13, their total
concerning the protection and prevention	21	for this entire document of 14 or so
of risks to health of persons exposed to	22	references, of which many are original
these cleavage fragments."	23	ANSES studies which appear to be related
		± ±
	points:  "To review toxicological and epidemiological evidence relating to cleavage fragments of minerals with non-asbestiform profiles: Actinolite, anthophyllite, tremolite, grunerite, riebeckite. What conclusions can be reached about their effects on health?  "2, what current data are available regarding the specific exposures to cleavage fragments and minerals cited above?  "3, are there routine analytics methods that can be implemented by laboratories accredited, capable of distinguishing the fibers?" And and they list the fibers there.  And it says, "On the conclusion of the expert appraisal, recommendations may be proposed concerning the protection and prevention of risks to health of persons exposed to	provisions and implementing risk management societies." And for it cites the French Public Health Code. The opinions are made public. And it states, "On August 28, 2014, ANSES was requested by the Directorate General for Labour, the Directorate General for Risk Protection" "Prevention and Directorate General for Health to undertake the following expert appraisal: Health effects and identification of cleavage fragments of amphiboles from quarried minerals." And it goes on, the second page, it says, "Against this background the request included the following  Page 467  points:  "To review toxicological and epidemiological evidence relating to cleavage fragments of minerals with non-asbestiform profiles: Actinolite, anthophyllite, tremolite, grunerite, riebeckite. What conclusions can be reached about their effects on health?  "2, what current data are available regarding the specific exposures to cleavage fragments and minerals cited above?  "3, are there routine analytics methods that can be implemented by laboratories accredited, capable of distinguishing the fibers?" And and they list the fibers there.  And it says, "On the conclusion of the expert appraisal, recommendations may be proposed concerning the protection and prevention of risks to health of persons exposed to

118 (Pages 466 to 469)

But more importantly, the references they cite, by Addison and McConnell, by Cyphert, by Davis, by llgren, Kodavanti, by me, who my name is spelled wrong. But we know that all of these, and Williams, all say that cleavage fragments do not pose a cancer risk.  So this study, or whatever individual, are not based upon the peer-reviewed scientific literature that is cited.  Q. So you disagree with their opinions about cleavage fragments?  A. I - I knew him in the early 10 decisionnaking."  And he worked for who, who did John Kelse work for? 13 A. When I corresponded with him, I believe he worked for whether that was his lifetime employer or not. I have no idea. Q. Says, "I can see how it would be helpful, part of the ongoing self-education process for ourselves and ode identification as Exhibit 22 Mossman-45.)  BY MR, SMITH: Q. Series of e-mails. I want  Page 471  you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the – it's going A. Okay. Q. You are going to go to the back forward.  Mell, Everstart at the – it's going A. Okay. Q. You are going to go to the back forward. MR, FROST: Objection. BY MR, SMITH: Q. And it's Peter Argust, director of regulatory affairs from Rio MR, FROST: Objection. BY MR, SMITH: Q. And it's Peter Argust, director of regulatory affairs from Rio MR, FROST: Objection. BY MR, SMITH: Q. And it's Peter Argust, director of regulatory affairs from Rio MR, FROST: Objection. BY MR, SMITH: Q. And it's Peter Argust, director of regulatory affairs from Rio MR industrial minerals asbestos. MITH: Q. And it's Peter Argust, director of regulatory affairs from Rio MR industrial minerals asbestos. MR industrial minerals asbestos. MR industrial minerals are attached article in industrial minerals asbestos. MR industrial minerals are attached article in industrial minerals asbestos. MR industrial minerals are attached article of industrial minerals are attached article in industrial minerals are attached article in industrial minerals are att		Page 470		Page 472
zerenences they cite, by Addison and 3 McConnell, by Cyphert, by Davis, by 4 Ilgren, Kodavanti, by me, who my name is 5 spelled wrong. But we know that all of 6 these, and Williams, all say that 7 cleavage fragments do not pose a cancer 7 risk. 8 non-asbestiform amphiboles, reviews 9 So this study, or whatever 10 it was, the conclusions of this 11 individual, are not based upon the 12 peer-reviewed scientific literature that 13 is cited. 9 So you disagree with their opinions about cleavage fragments? 15 A. I do. It's not supported by 16 their own references. 9 Q. Okay. I want to show you an 19 e-mail which I'm attaching as Exhibit 45. 20 (Document marked for 12 identification as Exhibit 45. 22 Mossman-45.) 22 Mossman-45.) 22 Mossman-45.) 23 BY MR. SMITH: 24 Q. Series of e-mails. I want 24 whole thing. Let's start at the – it's 26 going - A. Okay. 9 You to go to the second page. It's by 8 Soing - A. Okay. 9 You are going to go to the 8 back forward. 9 A. Okay. 1 Want I osh opinion. 11 BY MR. SMITH: 11 MR. FROST: Objection. 12 MR. FROST: Objection. 13 MR. FROST: Objection. 14 Minstrals minerals. And like Pierral and some others, regarding the article of 18 industrial minerals asbestos. 19 Julie - "Rich, Julie, and Gregour colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's 21 February 2008 edition. The subtitle, 175	1	But more importantly the	1	cleavage fragments ought not to be
McConnell, by Cyphert, by Davis, by Ilgren, Kodavanti, by me, who my name is spelled wrong. But we know that all of these, and Williams, all say that cleavage fragments do not pose a cancer risk.  So this study, or whatever lit was, the conclusions of this individual, are not based upon the peer-reviewed scientific literature that is cited.  Q. So you disagree with their opinions about cleavage fragments? A. I. of lish else work for?  A. I. of lish else work for or recent cases and warms against unreasoned decisionmaking."  And he worked for who, who did John Kelse work for?  By MR, SMITH:  And it states he with their onto treat the worked for who, who did John Kelse work for?  Page 471  Page 471  Page 471  Page 473  Page 474  Page 475  Page 471  Page 475  Page 471  Page 471  Page 4		1		
Ilgren, Kodavanti, by me, who my name is spelled wrong. But we know that all of these, and Williams, all say that cleavage fragments do not pose a cancer risk.   So this study, or whatever   So this study, or who				
spelled wrong. But we know that all of these, and Williams, all say that cleavage fragments do not pose a cancer risk.  So this study, or whatever it was, the conclusions of this individual, are not based upon the per-reviewed scientific literature that is cited.  Q. So you disagree with their opinions about cleavage fragments? A. I do. It's not supported by their own references. Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45. Q. Document marked for identification as Exhibit Q. Series of e-mails. I want  Page 471  you to go to the second page. It's by Rich Zazenski. Well, I want you to read the whole thing. Let's start at the it's going A. Okay. Q. You are going to go to the back forward. A. Okay. Q. You are going to go to the back forward. A. Okay. Q. You are going to go to the Back forward. A. Okay. Q. You are going to go to the Back forward. A. Okay. Q. You are going to go to the Back forward. A. Okay. Q. You are going to go to the Back forward. A. Okay. Q. You are going to go to the Back forward. A. Okay. Q. You are going to go to the Back forward. A. Okay. Q. You feel the article is accurate, helpful  Page 471  Page 471  Page 471  Page 471  Page 471  Page 473  A. I I knew him in the early 1190s. Recret cases and warns against unreasoned decisionmaking." And he worked for who, who diteision work for? A. When I corresponded with him; I believe he worked for onot. I have no idea.  Page 471  Page 471  Page 471  Page 471  Page 471  Page 471  Page 473  Page 473  Page 474  Page 475  Page 476  Page 477  Page 477  Page 477  Page 477  Page 478  Page 479  Page 479  Page 471  Page 479  Page 471  Page 473  Page 475  Page 476  Page 477  Page 477  Page 477  Page 477  Page 477  Page 478  Page 479  Page 479  Page 479  Page 471  Page 479  Page 471  Page 472  Page 473  Page 473  Page 473  Page 474  Page 474  Page 475  Page 476  Page 476  Page 476  Page 477  Page 477  Page 4				
these, and Williams, all say that cleavage fragments do not pose a cancer sisk.  So his study, or whatever it was, the conclusions of this individual, are not based upon the peer-reviewed scientific literature that is cited.  Q. So you disagree with their opinions about cleavage fragments? A. I do. It's not supported by their own references.  Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45.  Gought Mossman-45.  BY MR. SMITH: Q. Series of e-mails. I want  Page 471  you to go to the second page. It's by Rich Zazenski. Well, I want you to read the whole thing. Let's start at the it's going A. Okay. A. Okay. A. Okay. A. Wen I corresponded with him, I believe he worked for R.T. Vanderbilt, but I'm not certain whether that was his lifetime employer or not. I have no idea. Q. Says, "I can see how it would be helpful, part of the ongoing self-education process for ourselves and our business partners to have something our business partners to have something the experts like yourselves and advise if you feel the article is accurate, helpful  Page 471  you to go to the second page. It's by Rich Zazenski. Well, I want you to read the whole thing. Let's start at the it's going A. Okay. A. Okay. A. Okay. A. Well Torresponded with him, I believe he worked for R.T. Vanderbilt, but I'm not certain whether that was his lifetime employer or not. I have no idea.  Q. Says, "I can see how it whether that was his lifetime employer or not. I have no idea.  Q. Says, "I can see how it  our business partners to have something self-education process for ourselves and our business partners to have something our business partners to have something our business partners to have something the the worked for R.T. Vanderbilt, but I'm not certain whether that was his lifetime employer or not. I have no idea.  Q. Says, "I can see how it  The our business partners to have something our business				•
cleavage fragments do not pose a cancer risk.  So this study, or whatever it was, the conclusions of this individual, are not based upon the peer-reviewed scientific literature that is cited.  Q. So you disagree with their opinions about cleavage fragments?  A. I do. It's not supported by their own references.  Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45.  (Document marked for 21 identification as Exhibit 45.  Q. Series of e-mails. I want  Page 471  you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going A. Okay.  Q. You are going to go to the back forward.  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  Q. You are going to go to the sack forward.  A. Okay.  Q. And it's Peter Argust, director of regulatory affairs from Rio I'm diversible industrial minerals asbestos.  Julie "Rich, Julie, and Green was have a mineral deposition," and shared with me the attached article in lndustrial minerals asbestos.  Julie "Rich, Julie, and Green was was against unreasoned decisionmasking."  And it subset worked for who, who did John Kelse work for?  A. When I corresponded with him, believe the worked for who, who did John Kelse work for?  A. When I corresponded with him, believe he worked for who, who did John Kelse work for?  A. When I corresponded with whether that was his lifetime employer or not. I have no idea.  Q. Says, "I can see how it would be helpful, part of the ongoing self-education process for ourselves and our business partners to have something like this as a reference. But I defer to the experts like yourselves and our business partners to have something in the experts like yourselves and advise if you feel the article is accurate, helpful  Page 471  Then the response is from Rich Zazenski at regulatory affairs from Rich Zazenski at regulatory affairs e-mail address.  He says, "I had seen and read this article, and my first reaction was who really wrote this paper for John's si				•
risk.  So this study, or whatever it was, the conclusions of this individual, are not based upon the leaves of the peer-reviewed scientific literature that list is cited.  Q. So you disagree with their opinions about cleavage fragments? A. I do. It's not supported by their own references. Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45. (Document marked for lidentification as Exhibit Q. Series of e-mails. I want  Page 471  Page 471  pout to go to the second page. It's by Rich Zazenski. Well, I want you to read the whole thing. Let's start at the it's going A. Okay. Q. You are going to go to the back forward. A. Okay. A. Well i want you do read the whole thing. Let's start at the it's back forward. A. Okay. BYMR. SMITH: A. Okay. A. Okay. A. Okay. A. Okay. A. Okay. A. Okay. BYMR. SMITH: A. Okay. BYMR. SMITH: BY		The state of the s	7	
So this study, or whatever it was, the conclusions of this individual, are not based upon the peer-reviewed scientific literature that is cited.  Q. So you disagree with their opinions about cleavage fragments? A. I do. It's not supported by the irrown references. Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45. Q. Gocument marked for Mossman-45.) BY MR. SMITH: Q. Series of e-mails. I want  Page 471  Page 471  Page 471  page 473  Page 474  Page 475  Page 476  Page 477  Page 477  Page 477  Page 477  Page 478  Page 479  Page 479  Page 479  Page 479  Page 471  Page 473  Page 474  Page 475  Page 476  Page 477  Page 477  Page 477  Page 477  Page 478  Page 479  Page 479			8	•
it was, the conclusions of this individual, are not based upon the individual, are not based upon the peer-reviewed scientific literature that is cited.  2				
11	10	The state of the s	l	
peger-reviewed scientific literature that is cited.  Q. So you disagree with their opinions about cleavage fragments? A. I do. It's not supported by their own references.  Q. O Kay. I want to show you an e-mail which I'm attaching as Exhibit 45.  Q. Guement marked for contained identification as Exhibit 45.  BY MR. SMITH:  Q. Series of e-mails. I want  Page 471  page 471  page 471  pout to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  MR. FROST: Objection.	11		11	
is cited.  Q. So you disagree with their opinions about cleavage fragments?  A. I do. It's not supported by their own references.  Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45.  (Document marked for identification as Exhibit 45.  BY MR. SMITH:  Q. Series of e-mails. I want  Page 471  Page 471  page 472  page 473  you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  MR. FROST: Objection.	12		12	
14    Q. So you disagree with their opinions about cleavage fragments?   15    A. I do. It's not supported by their own references.   17    whether that was his lifetime employer or not. I have no idea.   Q. Says, "I can see how it would be helpful, part of the ongoing self-education process for ourselves and our business partners to have something like this as a reference. But I defer to the expension of the	13		13	
opinions about cleavage fragments?  A. I do. It's not supported by their own references.  Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45.  (Document marked for identification as Exhibit 45.  Mossman-45.)  BY MR. SMITH:  Q. Series of e-mails. I want  Page 471  page 471  page 473  page 473  page 473  professional reactions. Thanks and kind regards, Peter, Peter Argust.  Mol, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  MR. FROST: Objection.  MR. FROST: Objection.  MR. FROST: Objection.  MR. FROST: Objection.  MR. From Peter  And it states from Peter  And sustrial minerals asbestos.  Julie "Rich, Julie, and going to get of the USGS study of tale from Death Valley, California, we will a consult of tale (promo Death Valley, California, we can advise of tale from Death Valley, California, we can and roca deposit that just contains non-asbestiform tremolite.  And it states from Peter to the experts like yourselves and our business partners to have something like this as a reference. But I defer to the experts like yourselves and our business partners to have something like this as a reference. But I defer to the experts like yourselves and our business partners to have something like this as a reference. But I defer to the experts like yourselves and our business partners to have something like this as a reference. But I defer to the experts like yourselves and our business partners to have something like this as a reference. But I defer to the experts like yourselves and our business partners to have something like this as a reference. But I defer to the experts like yourselves and our business partners to have something like this as a reference. But I defer to the experts like yourselves and our business partners to have something like this as a reference. But I defer to tour business partners to have something like			l	=
16 A. I do. It's not supported by their own references.  17	15		15	
their own references.  Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45. (Document marked for (Document marker))			16	
Q. Okay. I want to show you an e-mail which I'm attaching as Exhibit 45.  (Document marked for didentification as Exhibit 45.  (Document marked for didentification as Exhibit 45.  (Document marked for didentification as Exhibit 21 our business partners to have something Mossman-45.)  22 BY MR. SMITH: 23 the experts like yourselves and advise if you feel the article is accurate, helpful  Page 471  Page 471  Page 473  Page 473  professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust,  director of regulatory affairs from Rio  Tinto Minerals.  And it states from Peter  And osme others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial minerals magazine's  February 2008 edition. The subtitle, '15  Page 471  Page 473  Or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rio 1 regards, Peter, Peter Argust."  Then the response is from going tregards, Peter, Peter Argust."  Then the response is from greathy are failed and regards, Peter, Peter Argust."  Then the response is from greathy are failed and regards, Peter, Peter Argust."  Then the response is from greathy are failed and regards, Peter, Peter Argust."  Then the response is from greathy are failed and regards, Peter, Peter Argust."  Then the response is from greathy are failed and regards, Peter, Peter Argust."  Then the response is from greathy are failed and regards, Peter, Peter Argust."  Then the response is from greathy are failed and regards, Peter, Peter Argust."  Then the response is from greathy are failed and regards, Peter, Peter Argust."  The nthe response is from greathy are failed and regards, Peter, Peter Argust."  The nthe response is from greathy are failed and regards			l	
comment marked for dentification as Exhibit 45.  (Document marked for dentification as Exhibit 21 dentification as Exhibit 22 Mossman-45.)  BY MR. SMITH: 23 the experts like yourselves and advise if you feel the article is accurate, helpful  Page 471  Page 471  Page 473  Page 473  Page 473  por not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Well, I want you to read the whole thing. Let's start at the it's going Send forward.  A. Okay. 6 manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  A. Okay. 9 He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?" I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. Well and some others, regarding the article of findustrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in 1ndustrial Minerals magazine's February 2008 edition. The subtitle, '15  Page 471  Page 473  To not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust.  Then the response is from Rich article of sort inchazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?" I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  "It believe the USGS study of talc from Death Valley, California,"			18	O. Says, "I can see how it
20 (Document marked for identification as Exhibit 21 identification as Exhibit 22 Mossman-45.) 22 like this as a reference. But I defer to 23 BY MR. SMITH: 23 the experts like yourselves and advise if 24 you feel the article is accurate, helpful 24 Page 471 Page 471  1 you to go to the second page. It's by 2 Rich Zazenski. 24 whole thing. Let's start at the it's 4 whole thing. Let's start at the it's 4 Then the response is from 25 going 5 Rich Zazenski at regulatory affairs 26 manager at Rio Tinto Minerals. And he's 26 got richzazenski@Luzenac.com as his 27 e-mail address. 29 A. Okay. 39 He says, "I had seen and 30 read this article, and my first reaction 30 was 'who really wrote this paper for 31 director of regulatory affairs from Rio 31 director of regulatory affairs from Rio 32 fairly technical person, but excuse me, 34 director of regulatory affairs from Rio 34 fairly technical person, but excuse me, 35 fairly technical person, but excuse me, 36 facts. Geologically it doesn't make 32 shared with me the attached article in 32 mon-asbestiform tremolite. 34 let from Death Valley, California, 35 fairly to Lyaley, California, 36 fairly believe the USGS study of 36 tale from Death Valley, California, 36 fairly california, 37 fairly pust contains 37 fairly pust contains 38 fairly ust contains 39 february 2008 edition. The subtitle, '15 sa shared with me the attached article in 21 line ustrial minerals aspects. 30 fairly believe the USGS study of 46 february 2008 edition. The subtitle, '15 sa shared with me the attached article in 21 line ustrial minerals and 22 february 2008 edition. The subtitle, '15 sa shared with me the attached article in 21 line ustrial minerals and 22 february 2008 edition. The subtitle, '15 sa shared with me the attached article in 21 line ustrial minerals and 22 february 2008 edition. The subtitle, '15 sa shared with me the attached article in 31 fairly technical cannot agree with 32 fairly technical person, but excuse me, 34 fairly technical person, but excuse me, 35 fairly t			l	
identification as Exhibit  Mossman-45.)  BY MR. SMITH:  Q. Series of e-mails. I want  Page 471  Page 473  Page 473  page 474  Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  MR. FROST: Objection.  BY MR. SMITH:  Dage 471  Page 473  page 473  ror not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust,  director of regulatory affairs from Rio  And it states from Peter  Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and  Greg, our colleagues, Miguel Galindo has shared with me the attached article in 21 mosawer is rebreaved.  Industrial Minerals magazine's  February 2008 edition. The subtitle, '15  Rage 473  our business partners to have something like this as a reference. But I defer to the experts like yoursels but I defer to the experts like yoursels was davise if you feel the article is accurate, helpful  the experts like yourselves and advise if you feel the article is accurate, helpful  Page 473  Page 473  Page 473  Then the response is from Rich regards, Peter, Peter Argust."  Then the response is from Rich regards, Peter, Peter Argust."  Then the response is from Rich regards, Peter, Peter Argust."  Then the response is from Rich regards, Peter, Peter Argust."  Then the response is from Rich regards, Peter, Peter Argust."  Then the response is from Rich regards, Peter, Peter Argust."  Then the response is from Rich regards, Peter, Peter Argust."  Then the response is from Rich areactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rour professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the expert Argu			l	
22 Mossman-45.) 23 BY MR. SMITH: 24 Q. Series of e-mails. I want  24 page 471  25 page 471  26 Page 471  27 professional reactions. Thanks and kind regards, Peter, Peter Argust."  28 page 472  29 professional reactions. Thanks and kind regards, Peter, Peter Argust."  40 whole thing. Let's start at the it's going  41 A. Okay.  42 Q. You are going to go to the back forward.  43 back forward.  44 back forward.  45 back forward.  46 back forward.  47 Q. You are going to go to the back forward.  48 back forward.  49 A. Okay.  40 A. Okay.  41 back forward.  41 back forward.  42 back forward.  43 back forward.  44 back forward.  45 back forward.  46 back forward.  47 back forward.  48 c-mail address.  49 A. Okay.  40 John's signature?" I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. But I defer to the experts like yourselves and advise if you feel the article of 17 his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  40 Tinto Minerals asbestos.  41 back this as a reference. But I defer to the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you feel the experts like yourselves and advise if you frechance in professional reactions. Thanks and kind regards, Peter, Peter Argust.  40 Then the response is from Peter Argust.  41 Each Zazenski at regulatory affairs from Rio Then the response is from read the argust.  42 John's signature?' I know John. He is a fairly technical person, but e		`	l	
BY MR. SMITH: Q. Series of e-mails. I want  Page 471  Page 471  Page 473  pour to go to the second page. It's by Rich Zazenski. Well, I want you to read the whole thing. Let's start at the it's going A. Okay. A. Okay. A. Okay. A. Okay. BY MR. FROST: Objection. BY MR. SMITH: Q. And it's Peter Argust, And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos. Julie "Rich, Julie, and Greg, our colleagues, Migue, and some others arguating in the experts like yourselves and advise if you feel the article is accurate, helpful  Page 471  Page 473  the experts like yourselves and advise if you feel the article is accurate, helpful  Page 473  or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Feter, and some other response is from professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Feter, and some other response is from Peter, and some other in the start at the it's argust to find Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and 19 sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  "I believe the USGS study of talc from Death Valley, California,	22			
Page 471  Page 471  Page 471  Page 473  pou to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust,  director of regulatory affairs from Rio  And it states from Peter  Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's  Page 471  Page 473  Page 475  Page 476  Page 476  Page 476  Page 477  Page 477  Page 477  Page 477  Page 477  Page 478  Page 478  Page 476  Page 478  Page 48  Page 478  Page 48	23		23	
Page 471  1 you to go to the second page. It's by 2 Rich Zazenski. 3 Well, I want you to read the 4 whole thing. Let's start at the it's 5 going 6 A. Okay. 7 Q. You are going to go to the 8 back forward. 9 A. Okay. 9 He says, "I had seen and 10 MR. FROST: Objection. 11 BY MR. SMITH: 12 Q. And it's Peter Argust, 13 director of regulatory affairs from Rio 14 Tinto Minerals. 15 And it states from Peter 16 Argust to Rich Zazenski and Julie Pier 17 and some others, regarding the article of 18 industrial minerals asbestos. 19 Julie "Rich, Julie, and 20 Greg, our colleagues, Miguel Galindo has shared with me the attached article, in Industrial Minerals magazine's 20 Tinto Means and table professional reactions. Thanks and kind regards, Peter, Peter Argust." 21 Then the response is from Rio regards, Peter, Peter Argust." 22 Then the response is from Rio regards, Peter, Peter Argust." 34 Then the response is from Rio treatments. Industrial Minerals and kind regards, Peter, Peter Argust." 35 Thanks and kind regards, Peter, Peter Argust." 36 Then the response is from Rio Thanks and kind regards, Peter, Peter Argust." 36 Thanks and kind regards, Peter, Peter Argust." 36 Then the response is from Rio Thanks and kind regards, Peter, Peter Argust." 37 Then the response is from Rio Thanks and kind regards, Peter, Peter Argust." 38 Then the response is from Rio Thanks and kind regards, Peter, Peter Argust." 39 Thanks and kind regards, Peter, Peter Argust." 4 Then the response is from Rio Thanks and kind regards, Peter, Peter Argust." 4 Then the response is from Rio Teach Argust at regulatory affairs manager at Rio Tinto Minerals. 4 Then the response is from Rio Thanks and kind regards, Peter, Peter Argust." 4 Then the response is from Rio Teach Argust at regulatory affairs manager at Rio Tinto Minerals. 4 Then the response is from Rio Teach Argust at regulatory affairs manager at Rio Tinto Minerals and the says, "I had seen and read the says, "I had seen and read the says, "I had seen and read the says, "I			l	
1 you to go to the second page. It's by 2 Rich Zazenski. 2 professional reactions. Thanks and kind 3 Well, I want you to read the 4 whole thing. Let's start at the it's 5 going 6 A. Okay. 7 Q. You are going to go to the 8 back forward. 9 A. Okay. 9 He says, "I had seen and 10 MR. FROST: Objection. 11 BY MR. SMITH: 12 Q. And it's Peter Argust, 13 director of regulatory affairs from Rio 14 Tinto Minerals. 15 And it states from Peter 16 Argust to Rich Zazenski and Julie Pier 17 and some others, regarding the article of 18 industrial minerals asbestos. 19 Julie "Rich, Julie, and 20 Greg, our colleagues, Miguel Galindo has shared with me the attached article in 21 Industrial Minerals magazine's 21 son to Could you give me your 22 professional reactions. Thanks and kind 3 regards, Peter, Peter Argust. 4 Then the response is from 22 professional reactions. Thanks and kind 3 regards, Peter, Peter Argust. 4 Then the response is from 2 professional reactions. Thanks and kind 3 regards, Peter, Peter Argust. 4 Then the response is from 8 Rich Zazenski at regulatory affairs 6 And he's 9 got richzazenski@Luzenac.com as his e-mail address.  9 He says, "I had seen and 10 read this article, and my first reaction 11 was 'who really wrote this paper for 12 John's signature?' I know John. He is a fairly technical person, but excuse me, 14 he would not write such an article and 15 cite 129 references. The answer is 16 obvious, regardless I cannot agree with 17 his position. We just don't have enough facts. Geologically it doesn't make 19 sense to me that you can have a mineral deposit that just contains 20 deposit that just contains 21 shared with me the attached article in 22 Industrial Minerals magazine's 23 February 2008 edition. The subtitle, '15 24 Tibelieve the USGS study of 25 talc from Death Valley, California,				, 1
Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going A. Okay.  A. Okay.  A. Okay.  A. Okay.  BY MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust,  Adirector of regulatory affairs from Rio Argust to Rich Zazenski ary regulatory affairs read this article, and my first reaction was 'who really wrote this paper for ladirector of regulatory affairs from Rio Argust to Rich Zazenski and Julie Pier Argust to Rich Zazenski and Julie Pier Argust to Rich Zazenski and Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's  Rich Zazenski, Peter Argust.  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  "I believe the USGS study of talc from Death Valley, California,		Dama 471	l	
Well, I want you to read the whole thing. Let's start at the it's going A. Okay.  Q. You are going to go to the back forward.  MR. FROST: Objection.  BY MR. SMITH: Q. And it's Peter Argust,  Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier Argust to Rich Zazenski and Julie Pier Argust to Rich Zazenski and Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15  Well, I want you to read the Regards, Peter, Peter Argust. Then the response is from Rio Then the response is from Rio Then the response is from Rich Zazenski at regulatory affairs Rich Zazenski at regulatory affairs an anager at Rio Tinto Minerals. And he's got richzazenski at regulatory affairs regards, Peter, Peter Argust. Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski at regulatory affairs regards, Peter, Peter Argust, Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski at regulatory affairs regardsny it at ser. Juha seen and read this article, and was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite. "I believe the USGS study of talc from Death Valley, California,		Page 4/1		Page 473
whole thing. Let's start at the it's going A. Okay. Q. You are going to go to the back forward. A. Okay. BY MR. FROST: Objection.  BY MR. SMITH: Q. And it's Peter Argust, Girector of regulatory affairs from Rio And it states from Peter Argust to Rich Zazenski and Julie Pier Argust to Rich Zazenski and Julie Pier Argust to Rich Zazenski and Julie, and Greg, our colleagues, Miguel Galindo has Library 2008 edition. The subtitle, '15  Who really wrote this paper for Argust to Rich Zazenski and Julie, '15  Who really wrote this paper for Library affairs from Rio Library and this article, and my first reaction Read this article, and my first reaction was 'who really wrote this paper for Library affairs from Rio Library affairs from Rio Library and this article, and my first reaction was 'who really wrote this paper for Library library library in keus and the sample of fairly technical person, but excuse me, Library affairs from Rio Library I know John. He is a Library library library in keus and the would not write such an article and Library affairs from Rio Library I know John. He is a Library library in know John. He is a Library library in know John. He is a Library library library reaction Remail address.  Library Lazenski at regulatory affairs Luzenac.com as his e-mail address.  Luzenac.com Luzenac.com And he's Cambrians and And he's Camb	1		1	or not. Could you give me your
5 going 6 A. Okay. 7 Q. You are going to go to the 8 back forward. 9 A. Okay. 9 He says, "I had seen and 10 MR. FROST: Objection. 11 BY MR. SMITH: 12 Q. And it's Peter Argust, 13 director of regulatory affairs from Rio 14 Tinto Minerals. 15 And it states from Peter 16 Argust to Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. 16 Argust to Rich Zazenski at obeying the article of 17 industrial minerals asbestos. 18 facts. Geologically it doesn't make 19 Julie "Rich, Julie, and 20 Greg, our colleagues, Miguel Galindo has 21 shared with me the attached article in 22 Industrial Minerals magazine's 23 February 2008 edition. The subtitle, '15 25 Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's 26 got richzazenski@Luzenac.com as his 27 e-mail address. 28 dermil address. 29 He says, "I had seen and 20 read this article, and my first reaction 21 was 'who really wrote this paper for 21 John's signature?' I know John. He is a 22 fairly technical person, but excuse me, 23 he would not write such an article and 24 cite 129 references. The answer is 25 obvious, regardless I cannot agree with 26 his position. We just don't have enough 27 facts. Geologically it doesn't make 28 sense to me that you can have a mineral deposit that just contains 29 non-asbestiform tremolite. 20 Industrial Minerals magazine's 21 "I believe the USGS study of 23 Tebruary 2008 edition. The subtitle, '15	2	you to go to the second page. It's by		or not. Could you give me your professional reactions. Thanks and kind
A. Okay.  Q. You are going to go to the back forward.  A. Okay.  A. Okay.  A. Okay.  BY MR. FROST: Objection.  C. And it's Peter Argust,  C. Tinto Minerals.  And it states from Peter  Argust to Rich Zazenski and Julie Pier  Argust to Rich Zazenski and Julie Pier  Argust to Rich Zazenski and Julie Pier  C. Argust to Rich Zazenski and Julie, and  C. Greg, our colleagues, Miguel Galindo has  And it stated article in  C. And with me the attached article in  C. And with me the attached article in  C. And with me the attached article, and my first reaction  C. And my first reaction  C. He says, "I had seen and  C. He says "I have says "I have says "I have selly with reaticle in and this article, and is a fairly technical person, but excuse me,  La He says "I have says "I have says "I have sa	2	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the	2	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."
Q. You are going to go to the back forward.  MR. FROST: Objection.  BY MR. SMITH: Q. And it's Peter Argust, Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier Argust to Rich Zazenski and Julie Pier Argust to Rich Zazenski and Julie, and Coreg, our colleagues, Miguel Galindo has And with me the attached article in Argust io Minerals magazine's Argust io Minerals	2 3 4	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the	2 3	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from
back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust,  Tinto Minerals.  And it states from Peter  Argust to Rich Zazenski and Julie Pier  and some others, regarding the article of  industrial minerals asbestos.  Julie "Rich, Julie, and  Greg, our colleagues, Miguel Galindo has  Tindustrial Minerals magazine's  Industrial Minerals magazine's  Be-mail address.  He says, "I had seen and  read this article, and my first reaction  was 'who really wrote this paper for  John's signature?' I know John. He is a  fairly technical person, but excuse me,  he would not write such an article and  cite 129 references. The answer is  obvious, regardless I cannot agree with  his position. We just don't have enough  facts. Geologically it doesn't make  sense to me that you can have a mineral  deposit that just contains  non-asbestiform tremolite.  "I believe the USGS study of  talc from Death Valley, California,	2 3 4 5	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's	2 3 4	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs
A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust,  Tinto Minerals.  Argust to Rich Zazenski and Julie Pier  Argust to Rich Zazenski and Julie Pier  Industrial minerals asbestos.  Julie "Rich, Julie, and  Greg, our colleagues, Miguel Galindo has  Lindustrial Minerals magazine's  MR. FROST: Objection.  10 read this article, and my first reaction  was 'who really wrote this paper for  John's signature?' I know John. He is a  fairly technical person, but excuse me,  he would not write such an article and  cite 129 references. The answer is  obvious, regardless I cannot agree with  his position. We just don't have enough  facts. Geologically it doesn't make  pagase to me that you can have a mineral  deposit that just contains  non-asbestiform tremolite.  "I believe the USGS study of  talc from Death Valley, California,	2 3 4 5 6	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.	2 3 4 5 6	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's
MR. FROST: Objection.  10 read this article, and my first reaction  11 BY MR. SMITH:  12 Q. And it's Peter Argust,  13 director of regulatory affairs from Rio  14 Tinto Minerals.  15 Argust to Rich Zazenski and Julie Pier  16 Argust to Rich Zazenski and Julie Pier  17 and some others, regarding the article of  18 industrial minerals asbestos.  19 Julie "Rich, Julie, and  20 Greg, our colleagues, Miguel Galindo has  21 shared with me the attached article in  22 Industrial Minerals magazine's  10 read this article, and my first reaction  was 'who really wrote this paper for  11 John's signature?' I know John. He is a  fairly technical person, but excuse me,  he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  21 Industrial Minerals magazine's  22 "I believe the USGS study of talc from Death Valley, California,	2 3 4 5 6 7	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay. Q. You are going to go to the	2 3 4 5 6 7	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his
11 BY MR. SMITH:  12 Q. And it's Peter Argust, 13 director of regulatory affairs from Rio 14 Tinto Minerals. 15 And it states from Peter 16 Argust to Rich Zazenski and Julie Pier 17 and some others, regarding the article of 18 industrial minerals asbestos. 19 Julie "Rich, Julie, and 20 Greg, our colleagues, Miguel Galindo has 21 shared with me the attached article in 22 Industrial Minerals magazine's 23 February 2008 edition. The subtitle, '15  12 was 'who really wrote this paper for 12 John's signature?' I know John. He is a 13 fairly technical person, but excuse me, 14 he would not write such an article and 15 cite 129 references. The answer is 16 obvious, regardless I cannot agree with 17 his position. We just don't have enough 18 facts. Geologically it doesn't make 19 sense to me that you can have a mineral 20 deposit that just contains 21 non-asbestiform tremolite. 22 "I believe the USGS study of 23 Tibelieve the USGS study of 24 talc from Death Valley, California,	2 3 4 5 6 7 8	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.	2 3 4 5 6 7 8	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.
Q. And it's Peter Argust, director of regulatory affairs from Rio  Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier And some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15  John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  "I believe the USGS study of talc from Death Valley, California,	2 3 4 5 6 7 8 9	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.	2 3 4 5 6 7 8	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and
director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15  And it states from Peter 15  Cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  "I believe the USGS study of talc from Death Valley, California,	2 3 4 5 6 7 8 9	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay. Q. You are going to go to the back forward. A. Okay. MR. FROST: Objection.	2 3 4 5 6 7 8 9	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction
Tinto Minerals.  And it states from Peter  Argust to Rich Zazenski and Julie Pier  And it states from Peter  Argust to Rich Zazenski and Julie Pier  Argust 129 references. The answer is  obvious, regardless I cannot agree with  his position. We just don't have enough  facts. Geologically it doesn't make  sense to me that you can have a mineral deposit that just contains  non-asbestiform tremolite.  Industrial Minerals magazine's  "I believe the USGS study of talc from Death Valley, California,	2 3 4 5 6 7 8 9 10	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:	2 3 4 5 6 7 8 9 10	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for
And it states from Peter  Argust to Rich Zazenski and Julie Pier  and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and  Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15  Cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  "I believe the USGS study of talc from Death Valley, California,	2 3 4 5 6 7 8 9 10 11 12	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust,	2 3 4 5 6 7 8 9 10 11 12	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a
Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15  Argust to Rich Zazenski and Julie Pier obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite. "I believe the USGS study of talc from Death Valley, California,	2 3 4 5 6 7 8 9 10 11 12 13	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio	2 3 4 5 6 7 8 9 10 11 12 13	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me,
and some others, regarding the article of industrial minerals asbestos.  18	2 3 4 5 6 7 8 9 10 11 12 13	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay. Q. You are going to go to the back forward. A. Okay.  MR. FROST: Objection. BY MR. SMITH: Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.	2 3 4 5 6 7 8 9 10 11 12 13	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and
industrial minerals asbestos.  19 Julie "Rich, Julie, and 20 Greg, our colleagues, Miguel Galindo has 21 shared with me the attached article in 22 Industrial Minerals magazine's 23 February 2008 edition. The subtitle, '15 24 facts. Geologically it doesn't make 29 sense to me that you can have a mineral 20 deposit that just contains 21 non-asbestiform tremolite. 22 "I believe the USGS study of 23 talc from Death Valley, California,	2 3 4 5 6 7 8 9 10 11 12 13 14 15	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter	2 3 4 5 6 7 8 9 10 11 12 13 14 15	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is
Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15 sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  21 mon-asbestiform tremolite. 22 "I believe the USGS study of talc from Death Valley, California,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with
Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15 Industrial Minerals magazine's Ind	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough
shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15 Industrial Minerals magazine's Industrial Mi	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make
Industrial Minerals magazine's 22 "I believe the USGS study of talc from Death Valley, California,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral
February 2008 edition. The subtitle, '15 23 talc from Death Valley, California,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains
, , , , , , , , , , , , , , , , , , ,	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.
years after OSHA ruled that common 24 nailed it correctly. That if a deposit	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  "I believe the USGS study of
	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	you to go to the second page. It's by Rich Zazenski.  Well, I want you to read the whole thing. Let's start at the it's going  A. Okay.  Q. You are going to go to the back forward.  A. Okay.  MR. FROST: Objection.  BY MR. SMITH:  Q. And it's Peter Argust, director of regulatory affairs from Rio Tinto Minerals.  And it states from Peter Argust to Rich Zazenski and Julie Pier and some others, regarding the article of industrial minerals asbestos.  Julie "Rich, Julie, and Greg, our colleagues, Miguel Galindo has shared with me the attached article in Industrial Minerals magazine's February 2008 edition. The subtitle, '15	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	or not. Could you give me your professional reactions. Thanks and kind regards, Peter, Peter Argust."  Then the response is from Rich Zazenski at regulatory affairs manager at Rio Tinto Minerals. And he's got richzazenski@Luzenac.com as his e-mail address.  He says, "I had seen and read this article, and my first reaction was 'who really wrote this paper for John's signature?' I know John. He is a fairly technical person, but excuse me, he would not write such an article and cite 129 references. The answer is obvious, regardless I cannot agree with his position. We just don't have enough facts. Geologically it doesn't make sense to me that you can have a mineral deposit that just contains non-asbestiform tremolite.  "I believe the USGS study of talc from Death Valley, California,

119 (Pages 470 to 473)

	Page 474		Page 476			
1	contains 'non-asbestiform' tremolite,	1	listed on here. So I guess I'm			
2	there is also asbestiform tremolite	2	missing the point of this.			
3	naturally present as well. And since	3	What I stated is that my			
4	tremolite was never really a large	4	research, animal studies, and OSHA			
5	commercial mineral such as chrysotile or	5	still to this day agree that			
6	crocidolite, there is not enough medical	6	cleavage fragments do not pose the			
7	data to conclude that 'blocky' tremolite	7	same health risks as their			
8	is simply a nuisance dust.	8	asbestiform counterparts.			
9	"But that has been the story	9	BY MR. SMITH:			
10	line for Vanderbilt for years and they	10	Q. Do you believe they pose any			
11	are sticking to it. I closely followed	11	health risk?			
12	the OSHA/Vanderbilt debate during the	12	MR. FROST: Objection.			
13	1990s. Essentially OSHA 'threw in the	13	THE WITNESS: Well,			
14	towel,' rather than expend their limited	14	that's that's subjective.			
15	resources on this issue. Their decision	15	Certainly with regard to			
16	by no means should be interpreted as a	16	mesothelioma, no. There have been			
17	vindication of Vanderbilt's arguments.	17	many studies, including recent			
18	"Back in the late 1970s and	18	ones from the EPA, that argue			
19	1980s, other talc companies were	19	against cleavage fragments as			
20	distancing themselves from any deposit	20	causing cancer in animals.			
21	that contained tremolite and of" "all,	21	BY MR. SMITH:			
22	of course, but Vanderbilt. They"	22	Q. What about ovarian cancer?			
23	"Then they proceeded to poison the well."	23	MR. FROST: Objection.			
24	Then the last e-mail is from	24	THE WITNESS: There in all			
	Page 475		Page 477			
1	Michelle I can't pronounce her last	1	of the experiments with cleavage			
2	name, from Rio Tinto Minerals, sent on	2	fragments in animals, ovarian			
3	January 31st, 2008. And it said, "Dear	3	cancers have not developed.			
4	all, I agree with Rich's position."	4	BY MR. SMITH:			
5	So regarding cleavage	5	Q. Well, tell me what studies			
6	fragments and their ill health effects,	6	have studied cleavage fragments in their			
7	you had the employee of Luzenac, who was	7	relation to ovarian cancer.			
8	head of regulatory affairs he was the	8	A. What I'm saying is that			
9	regulatory affairs manager, Rich	9	cleavage fragments, by a variety of			
10	Zazenski, disagreeing with your position;	10	routes, inhalation, intrapleural			
11	is that correct?	11	injection, intraperitoneal, have not			
12	MR. FROST: Objection. I'll	12	developed have not resulted in the			
13	just object to reading the e-mail	13	development of ovarian cancers in			
14	in, but	14	animals. Hundreds of			
15	THE WITNESS: He was	15	Q. Tell me the study that			
16	disagreeing with my position on?	16	studied cleavage fragments and their			
17	BY MR. SMITH:	17	relationship to ovarian cancer.			
18	Q. On the ill health effects of	18	MR. FROST: Objection.			
19	asbestos excuse me of cleavage	19	BY MR. SMITH:			
20	fragments on exposures.	20	Q. I want the specific study			
21	MR. FROST: Objection.	21	that you're referencing.			
22	THE WITNESS: Yeah, I'm not	22	A. That's not what I said. I'm			
23	sure what this correspondence is.	23	saying that cleavage fragments of a			
24	I have not I don't think I'm	24	variety of types have been assessed in			
I						

120 (Pages 474 to 477)

-							
	Page 478		Page 480				
1	lifetime studies with animals, including	1	of them may be summarized in IARC.				
2	studies with tremolite asbestos and	2	BY MR. SMITH:				
3	tremolite non-asbestos cleavage	3	Q. All right. Let's move on.				
4	fragments.	4	Bullet Point 4. "Trace amounts of				
5	None of those studies have	5	cleavage fragments or other minerals may				
6	ovarian cancer develop with either	6	be present in industrial and cosmetic				
7	asbestos other cleavage fragments.	7	tales have little or no chemical				
8	Q. Have you do you know if	8	biological reactivity."				
9	even ovarian cancer was looked for in	9	We've gone through, I think,				
10	those studies?	10	some studies just a minute ago about				
11	MR. FROST: Objection.	11	French government and NIOSH, and I'm				
12	THE WITNESS: These are	12	going to leave that bullet point alone.				
13	lifetime studies	13	A. Okay.				
14	BY MR. SMITH:	14	Q. Next bullet point. The				
15	Q. Which studies? I need the	15	numerous "The results of numerous				
16	names of them.	16	epidemiological and experimental studies				
17	MR. FROST: Objection.	17	assessing carcinogenic potential short				
18	THE WITNESS: Okay. Well, I	18	asbestos support the concept that short				
19	suggest that there many of them	19	fibers and cleavage fragments, even of				
20	are in my expert report. The ones	20	respirable dimensions, do not play a role				
21	that I can think of are	21	in the induction of tumors."				
22	Drs. Coffin at the EPA, recent	22	You have not looked at Longo				
23	studies by Cyphert, C-Y-P-H-E-R-T,	23	or Rigler's testing or any internal				
24	who looked at ferro-actinolite	24	documents about what asbestos has been				
	Page 479		Page 481				
1	cleavage fragments.	1	found in Baby Powder or Shower to Shower,				
2	BY MR. SMITH:	2	correct?				
3	Q. And ovarian cancer?	3	MR. FROST: Objection.				
4	A. What I'm telling you is that	4	THE WITNESS: Yes. This is				
5	people have not looked at ovarian cancer	5	not relevant to this, my				
6	and done studies and said, we're going to	6	conclusions here. My conclusions				
7	expose animals and see whether they get	7	in terms of epidemiology and				
8	ovarian cancers. What they have looked	8	experimental studies are based				
9	at have been lifetime studies in a	9	upon the peer-reviewed scientific				
10	variety of organs and has not these	10	literature and do not support the				
11	have not indicated that ovarian cancers	11	concept that short fibers or				
12	are a signature of cleavage fragments,	12	cleavage fragments play a role in				
13	regardless of how much was instilled and	13	the induction of mesotheliomas or				
14	regardless of the route of administration	14	ovarian cancers.				
15	over the lifetime of the animals, all of	15	BY MR. SMITH:				
16	whom who were autopsied at death.	16	Q. Well				
17	Q. Do you know any of those	17	A. And those are all referenced				
18	that specifically looked at exposing	18	within the report.				
19	cleavage fragments and then to ovarian	19	Q. Well, my point what I was				
20	tissue to determine whether they were	20	trying to get to, my second question is,				
21	carcinogenic or had carcinogenic	21	you don't know the fiber size or length				
22	properties to the ovaries?	22	of asbestos found in these Baby Powder				
22							
23	MR. FROST: Objection.	23	bottles or Shower to Shower bottles. You				
	MR. FROST: Objection. THE WITNESS: I believe some	23 24	bottles or Shower to Shower bottles. You haven't seen the studies.				

121 (Pages 478 to 481)

	Page 482		Page 484
1	MR. FROST: Objection to	1	effects document. These were summarized
2	form.	2	in 1990.
3	THE WITNESS: Again, sir, it	3	Q. Well, you told me earlier
4	doesn't make any difference. All	4	that you had not performed any studies on
5	of these studies and use of these	5	those particular types of asbestos.
6	materials, regardless of their	6	MR. FROST: Objection.
7	source, were covered by cohort	7	THE WITNESS: These are not
8	studies with women looking at talc	8	my studies. They are studies
9	exposures. And none of these have	9	where individuals have added
10	shown convincing or statistical	10	fibers of a variety of types of
11	increase in risk, and they haven't	11	asbestos to cells and have shown
12	indicated dose-response or	12	that threshold levels exist below
13	frequency effect.	13	which biological effects
14	So if they if there were	14	indicative of tumor formation do
15	fibers there, such as asbestos	15	not occur.
16	fibers in trace amounts or small	16	BY MR. SMITH:
17	amounts, it still it wasn't	17	Q. As we discussed earlier, the
18	reflected at an increased	18	levels of exposure of each type of
19	incidence of disease.	19	asbestos in cosmetic-grade talc in terms
20	BY MR. SMITH:	20	of human risk are outside your area of
21	Q. Fifth bullet point,	21	expertise, correct?
22	"Experimental studies demonstrate no	22	MR. FROST: Objection.
23	adverse effect levels from exposure to	23	THE WITNESS: Could you slow
24	certain concentrations of asbestos	24	down and
	Page 483		Page 485
1	fibers, indicating the existence of a	1	BY MR. SMITH:
2	threshold for cancer causation below	2	Q. As we discussed earlier, the
3	which tumors do not develop."	3	levels of exposure of each type of
4	None of the studies that you	4	asbestos in cosmetic-grade talc in terms
5	cite for support of this opinion deal	5	of human risk are outside of your area of
6	with tremolite, anthophyllite, or	6	expertise, we talked about that earlier,
7	actinolite, correct?	7	correct?
8	MR. FROST: Objection.	8	MR. FROST: Objection.
9	THE WITNESS: I'd have to go	9	THE WITNESS: And, again, I
10	back and look at the	10	emphasize that it doesn't make any
11	experimental studies that I'm	11	difference what their levels would
	. 11	12	ha in historiaally in talayses
12	talking about are my own with		be, in historically in talcum
13	inhalation. And there are a	13	powder if individuals using these
13 14	inhalation. And there are a variety of studies with thresholds	13 14	
13 14 15	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a	13 14 15	powder if individuals using these products did not develop ovarian cancers.
13 14 15 16	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a 2018 publication.	13 14 15 16	powder if individuals using these products did not develop ovarian cancers.  BY MR. SMITH:
13 14 15 16 17	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a	13 14 15 16 17	powder if individuals using these products did not develop ovarian cancers.  BY MR. SMITH:  Q. All right. Let's go to
13 14 15 16 17	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a 2018 publication.	13 14 15 16 17 18	powder if individuals using these products did not develop ovarian cancers.  BY MR. SMITH:  Q. All right. Let's go to as far as the money that you've been
13 14 15 16 17 18 19	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a 2018 publication. BY MR. SMITH:	13 14 15 16 17	powder if individuals using these products did not develop ovarian cancers.  BY MR. SMITH:  Q. All right. Let's go to as far as the money that you've been paid, how much much for J&J have they
13 14 15 16 17 18 19 20	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a 2018 publication. BY MR. SMITH: Q. But they don't deal with	13 14 15 16 17 18	powder if individuals using these products did not develop ovarian cancers.  BY MR. SMITH:  Q. All right. Let's go to as far as the money that you've been paid, how much much for J&J have they paid you totally, not just from the MDL?
13 14 15 16 17 18 19 20 21	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a 2018 publication.  BY MR. SMITH: Q. But they don't deal with tremolite asbestos, anthophyllite	13 14 15 16 17 18 19	powder if individuals using these products did not develop ovarian cancers.  BY MR. SMITH:  Q. All right. Let's go to as far as the money that you've been paid, how much much for J&J have they
13 14 15 16 17 18 19 20	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a 2018 publication.  BY MR. SMITH: Q. But they don't deal with tremolite asbestos, anthophyllite asbestos, or actinolite asbestos; is that	13 14 15 16 17 18 19 20	powder if individuals using these products did not develop ovarian cancers.  BY MR. SMITH:  Q. All right. Let's go to as far as the money that you've been paid, how much much for J&J have they paid you totally, not just from the MDL?
13 14 15 16 17 18 19 20 21	inhalation. And there are a variety of studies with thresholds in vitro that I summarize in a 2018 publication.  BY MR. SMITH:  Q. But they don't deal with tremolite asbestos, anthophyllite asbestos, or actinolite asbestos; is that correct?	13 14 15 16 17 18 19 20 21	powder if individuals using these products did not develop ovarian cancers.  BY MR. SMITH:  Q. All right. Let's go to as far as the money that you've been paid, how much much for J&J have they paid you totally, not just from the MDL?  How much have you made in

122 (Pages 482 to 485)

	Page 486		Page 488
1	no idea.	1	BY MR. SMITH:
2	Q. Can we get that, can you get	2	Q. That's not it's
3	that figure together and give it to your	3	nonresponsive. That's all I needed to
4	attorneys to give to us? Because I want	4	know.
5	the answer to that.	5	A. Okay.
6	A. Sure. What what	6	Q. Have you spoken to Dr. Shih
7	information would you like?	7	about this case?
8		8	
9	Q. How much you have made from		A. I have not.
	Johnson & Johnson in total, not just from	9	Q. Have you communicated with
10	the MDL, and how much money have you made	10	Dr. Ann Wiley about this case?
11	since 2014 working in talc litigation.	11	A. Not this case, no.
12	A. For Johnson & Johnson?	12	Q. When was the last time you
13	Okay.	13	spoke to her?
14	MR. FROST: You can follow	14	A. Spoke to her? I would say
15	up with a letter, we'll take it	15	probably last November at a meeting. A
16	under advisement.	16	scientific meeting.
17	THE WITNESS: Yeah. That's	17	Q. Have you discussed her depo
18	fine.	18	with her?
19	MS. O'DELL: Thank you.	19	A. My depo?
20	THE WITNESS: Mm-hmm.	20	Q. Hers.
21	BY MR. SMITH:	21	A. No, I haven't read her depo.
22	Q. You talked about Shih	22	Q. Have you discussed your depo
23	earlier. Is it your belief that this	23	with her?
24	study tested Johnson & Johnson talc?	24	A. No.
	Page 487		Page 489
-			
1	A. The studies that I saw by	1	Q. Have you spoken or
2	A. The studies that I saw by Shih	1 2	Q. Have you spoken or communicated with Dr. Laura Webb about
		1	
2	Shih	2	communicated with Dr. Laura Webb about
2 3	Shih Q. It was an expert report.	2 3	communicated with Dr. Laura Webb about this case?
2 3 4	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an	2 3 4	communicated with Dr. Laura Webb about this case?  A. No, I have not.
2 3 4 5	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a	2 3 4 5	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont?
2 3 4 5 6 7	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient,	2 3 4 5 6	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before.
2 3 4 5 6 7 8	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic	2 3 4 5 6 7	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with
2 3 4 5 6 7 8 9	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location	2 3 4 5 6 7 8	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar?
2 3 4 5 6 7 8 9	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH:	2 3 4 5 6 7 8 9	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar?
2 3 4 5 6 7 8 9 10	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific	2 3 4 5 6 7 8 9 10	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual.
2 3 4 5 6 7 8 9 10 11 12	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I	2 3 4 5 6 7 8 9 10 11 12	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What
2 3 4 5 6 7 8 9 10 11 12 13	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly.	2 3 4 5 6 7 8 9 10 11 12 13	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes
2 3 4 5 6 7 8 9 10 11 12 13	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the	2 3 4 5 6 7 8 9 10 11 12 13 14	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?
2 3 4 5 6 7 8 9 10 11 12 13 14 15	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report	2 3 4 5 6 7 8 9 10 11 12 13 14 15	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection. THE WITNESS: Nickel?
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said was a whiz-bang expert report, is it your	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.  THE WITNESS: Nickel? BY MR. SMITH:
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Shih Q. It was an expert report. MR. FROST: Objection. THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said was a whiz-bang expert report, is it your belief that this this report tested	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.  THE WITNESS: Nickel?  BY MR. SMITH: Q. Yes.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	Shih  Q. It was an expert report.  MR. FROST: Objection.  THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH:  Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said was a whiz-bang expert report, is it your belief that this this report tested J&J talc?	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.  THE WITNESS: Nickel?  BY MR. SMITH: Q. Yes. A. It's particulate nickel.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	Shih  Q. It was an expert report.  MR. FROST: Objection.  THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said was a whiz-bang expert report, is it your belief that this this report tested J&J talc?  MR. FROST: Objection.	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.  THE WITNESS: Nickel? BY MR. SMITH: Q. Yes. A. It's particulate nickel. And no, it's generally through DNA
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	Shih  Q. It was an expert report.  MR. FROST: Objection.  THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said was a whiz-bang expert report, is it your belief that this this report tested J&J talc?  MR. FROST: Objection. THE WITNESS: I did not look	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.  THE WITNESS: Nickel? BY MR. SMITH: Q. Yes. A. It's particulate nickel. And no, it's generally through DNA damage. Nickel has a lot of effects on
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Shih  Q. It was an expert report.  MR. FROST: Objection.  THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said was a whiz-bang expert report, is it your belief that this this report tested J&J talc?  MR. FROST: Objection. THE WITNESS: I did not look at that information. These I	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.  THE WITNESS: Nickel? BY MR. SMITH: Q. Yes. A. It's particulate nickel. And no, it's generally through DNA damage. Nickel has a lot of effects on cells.
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	Shih  Q. It was an expert report.  MR. FROST: Objection.  THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said was a whiz-bang expert report, is it your belief that this this report tested J&J talc?  MR. FROST: Objection.  THE WITNESS: I did not look at that information. These I believe were lesions from	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.  THE WITNESS: Nickel? BY MR. SMITH: Q. Yes. A. It's particulate nickel. And no, it's generally through DNA damage. Nickel has a lot of effects on cells. Q. Can other heavy metals cause
2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	Shih  Q. It was an expert report.  MR. FROST: Objection.  THE WITNESS: It was an let me emphasize. It was a scientific study where incipient, what are called pre-neoplastic lesions in the serous location BY MR. SMITH: Q. Now, I'm Doctor, specific to my I'm sorry, I'm short on time. I need you to answer the question directly. Is it your belief that the study, the Shih study, the expert report that we discussed earlier that you said was a whiz-bang expert report, is it your belief that this this report tested J&J talc?  MR. FROST: Objection. THE WITNESS: I did not look at that information. These I	2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22	communicated with Dr. Laura Webb about this case?  A. No, I have not. Q. She is a geologist here at the University of Vermont? A. Yes, I've met her before. Q. Have you communicated with Dr. Melinda Darby Dyar? A. I don't know that individual. Q. Heavy metals, nickels. What is the mechanism by which it causes cancer? Is it in connection?  MR. FROST: Objection.  THE WITNESS: Nickel? BY MR. SMITH: Q. Yes. A. It's particulate nickel. And no, it's generally through DNA damage. Nickel has a lot of effects on cells.

123 (Pages 486 to 489)

	7 400	1	
	Page 490		Page 492
1	chromium, cobalt, arsenic?	1	Health Part A.
2	A. Any material at a high	2	Do you recall that?
3	enough concentration is going to cause	3	A. Yes. This is a paper that
4	inflammation, whether it's pathogenic or	4	was presented at a conference of which
5	not.	5	the journal published the conference
6	Q. Can heavy metals be	6	paper. So it wouldn't be through a
7	cocarcinogens?	7	let's say a review review process as
8	MR. FROST: Objection.	8	would I would have done for a
9	THE WITNESS: With cigarette	9	high-impact journal. It was a
10	smoke or other agents, I am sure	10	(Document marked for
11	there's data out there. I have	11	identification as Exhibit
12	not reviewed it. I can't give you	12	Mossman-46.)
13	an affirmative or a yes or no	13	BY MR. SMITH:
14	on that.	14	Q. Well, here is the impact
15	BY MR. SMITH:	15	factor during the year that you published
16	Q. And Bob Glenn, I saw in some	16	Hillegass, which was 1.637. Do you see
17	of your notes. He testified that "if	17	that? Look at the screen.
18	there were fiber" "were a fiber of	18	MR. FROST: Objection.
19	asbestos in talcum-based products, it	19	THE WITNESS: Yeah, that
20	•	20	that could have been. This was a
21	would certainly provide a biologically	21	journal that was used by the EPA
	plausible mechanism for increased lung	22	scientists for meetings, and as I
22	disease, and that he suspected it would	23	
23	also have similar mechanism of disease in	24	emphasize, the original data in
24	other tissues and organs."	24	that paper was
	Page 491		Page 493
1	Do you agree with him?	1	MR. SMITH: How much time I
2	MR. FROST: Objection.	2	got?
3	THE WITNESS: I believe that	3	THE WITNESS: reported by
4	was a misquote in Dr. Zelikoff's	4	Dr. Shukla.
5	report.	5	BY MR. SMITH:
6	BY MR. SMITH:	6	Q. Okay.
7	Q. All right. Let's go to your	7	A. So this was a conference
8	report real quick.	8	paper.
9	You stated there was a	9	Q. I want to go to your report.
10	criticism of Dr. Saed about the	10	And on Page 10, it says, "Anatomy of the
11	low-impact journal. You said you put his	11	Female Reproductive Parts And Barriers To
12	impact journal figures out about his	12	Particles."
13	publication. Do you recall that? And it	13	It says, "As illustrated in
14	was 2.548; is that right?	14	Figure 3 below, the extended genitalia
15	A. No, I didn't put his impact	15	are the first line of defense in that
16	figure out there. I provided a table of	16	'the skin constitutes a relatively
17	impact factors.	17	impenetrable barrier to most
18	•	18	microorganisms unless breached by injury
	Q. Okay. And regardless it's	19	
19	in your report, correct?	I	such as abrasion or burning."
20	A. I have a table of impact	20	You believe that the female
21	factors, yes, in my report.	21	reproductive tract, there's an
22	Q. Okay. And your the	22	impenetrable barrier?
23	Hillegass study was published in the	23	MR. FROST: Objection.
24	Journal of Toxicology and Environmental	24	THE WITNESS: I think
1		I	

	Page 494		Page 496
1	what I'm emphasizing here, and	1	or not he used fallopian tubes cells in
2	this is a book that actually has	2	his study?
3	been used to tutor individuals in	3	A. It may have been one of the
4	basic pathology, that the skin is	4	lines that he looked at, but whether they
5	an impenetrable barrier to	5	were normal or whether it was his one
6	particulate matter.	6	normal line
7	BY MR. SMITH:	7	Q. Do you know?
8	Q. Okay. Let's go to the next	8	A it is unclear. No.
9	page. It talks about "ovarian cancer"	9	Q. Did you have do you have
10	"cancers develop from epithelial cells	10	the capability of replicating Dr. Saed's
11	that line the ovaries and oviducts,	11	study if you wanted to try to replicate
12	fallopian tubes. These structures are	12	it?
13	surrounded by a protected fibrous	13	MR. FROST: Objection.
14	capsule."	14	THE WITNESS: I wouldn't
15	What fibrous capsule is	15	want to.
16	around human ovarian ovaries?	16	BY MR. SMITH:
17	MR. FROST: Objection.	17	Q. Could you replicate it?
18	THE WITNESS: So the ovarian	18	MR. FROST: Objection.
19		19	BY MR. SMITH:
	epithelium is lined by something	20	
20	called the submucosal or the	1	Q. Could you do it?
21	interstitium. And that's	21	A. I wouldn't do it the same
22	comprised of blood vessels and	22	way he did it.
23	fibers, meaning fibers from the	23	Q. I don't that's not what
24	stroma. So this is called a	24	I'm asking. I'm asking, could you
	Page 495		Page 497
1	protective fibrous capsule.	1	replicate it if I asked you to do it?
2	Similar to the the lung	2	MR. FROST: Objection.
3	epithelium, which has a supportive	3	BY MR. SMITH:
4	fibrous capsule under it, called	4	Q. Do you have the ability to
5	the interstitium. It's sometimes	5	do it?
6	called the stroma.	6	A. As he did, there are so many
7	BY MR. SMITH:	7	flaws in his methodology, I just don't
8	Q. Do you know what we did	8	know where to start. I mean, if we had
9	the conversion charts of well, do you	9	two hours, fine.
10	know the concentration levels that	10	Q. My question is very simple.
11	Dr. Saed used in his study?	11	If you had the do you have the
12	A. That was very difficult to	12	capability of replicating his study? Yes
13	discern.	13	or no?
14	Q. Okay. Do you know did	14	MR. FROST: Objection.
15	you know did you see if Dr. Saed used	15	THE WITNESS: I wouldn't
16	normal epithelial cells?	16	want to. And it has when you
17	A. If he did, the	17	say replicate
18	Q. Do you know if he did or	18	BY MR. SMITH:
19	not?	19	Q. If you just followed exactly
20	MR. FROST: Objection.	20	what he did in his study, could you do
21	THE WITNESS: I doubt very	21	exactly what he did if I told you to do
22	much he did.	22	exactly what he did in his study?
23	BY MR. SMITH:	23	A. I wouldn't I wouldn't do
24	Q. Okay. Do you know whether	24	it.
<b>4</b> T			

125 (Pages 494 to 497)

	Page 498		Page 500
1	Q. That's not what I'm asking.	1	THE WITNESS: They are
2	I'm saying could you? Do you have the	2	Vermont and Italian talc sources
3	ability to do it?	3	from which Johnson's material may
4	A. As he did it?	4	have come from.
5	Q. Again, I do you have the	5	BY MR. SMITH:
6	ability to replicate his study? Yes or	6	Q. May have?
7	no?	7	A. I don't know the details on
		8	that.
8 9	MR. FROST: Objection. THE WITNESS: Based upon how	9	
10	1	10	Q. Okay. All right. Next page, Page 29. You have Karageorgi
11	he describes it, no, there's not	11	
12	enough detail there. BY MR. SMITH:	12	listed. And it says, "This group studied
		13	the possible relationship between use of
13	Q. Okay.	14	talcum powder and endometrial cancer."
14	A. And there's so many flaws.		Do you see that?
15	Q. Did you attempt to replicate	15	A. Yes.
16	his study and did you attempt to	16	Q. And you say, "This group
17	replicate his study?	17	found no statistical association and
18	A. You mean I would actually	18	concluded that future studies were
19	perform that study	19	needed." You're saying that the
20	Q. Yep.	20	Karageorgi found no statistical
21	A as he did?	21	association between talcum powder and
22	Q. Yep.	22	endometrial cancer risk? Is that what
23	A. No. I wouldn't bother,	23	the conclusion of this study was?
24	because it doesn't tell you anything.	24	A. I'd have to go back and look
	Page 499		Page 501
1	Q. You have a statement on Page	1	at it. It dealt with endometrial
2	28. You have two studies cited for there	2	cancers. I'd have to go back and review
3	not being talc I mean, excuse me,	3	it.
4	asbestos in Baby Powder. And that is	4	Dr. Saed stated it had
5	Boundy and Pira.	5	that it studied ovarian cancer, and that
6	Do you see that on Page 28,	6	was not the case.
7	first bullet point?	7	Q. That's not my question to
8	A. These are studies on the	8	you, Doctor. My question to you is, did
9	workers that were exposed to these talcs.	9	the study conclude that there was no
10	Q. Is that your basis that	10	statistical association found between
11	there is not asbestos in Baby Powder or	11	talcum powder use and endometrial cancer?
12	Shower to Shower?	12	MR. FROST: Objection.
13	MR. FROST: Objection to	13	THE WITNESS: It I
14	form.	14	believe that it stated there might
15	THE WITNESS: It was stated	15	be a risk, but future studies were
16	in these industrial tales that	16	merited. I don't recall it
17	they were not associated with	17	without looking at the
18	asbestos contamination.	18	(Document marked for
19	BY MR. SMITH:	19	identification as Exhibit
20	Q. Those are industrial tales,	20	Mossman-47.)
21	not cosmetic-grade tales. You understand	21	BY MR. SMITH:
22	Baby Powder and Shower to Shower are	22	Q. This is the next numbered
23	cosmetic-grade talcs, ma'am, don't you?	23	exhibit, 47.
24	MR. FROST: Objection.	24	A conclusions.
Í	·		

126 (Pages 498 to 501)

	- F00		504
	Page 502		Page 504
1	Q. And this is that study?	1	results were at the low level of
2	A. Okay.	2	talc exposure and resulted in no
3	Q. And we go to conclusions	3	significant increases; therefore,
4	right at the first of the abstract. "Our	4	you didn't get a time-dependent or
5	results suggest that perineal talcum	5	dose-dependent increase
6	powder use increases the risk of	6	BY MR. SMITH:
7	endometrial cancer, particularly around	7	Q. Well, I don't want to go
8	postmenopausal women."	8	back over it
9	Attach that as Exhibit 47.	9	A in gene expression.
10	MR. FROST: Objection. I	10	Q but you don't know if you
11	don't know that there's a question	11	got a time or dose-dependent at the
12	there.	12	higher concentrations because you didn't
13	BY MR. SMITH:	13	test it.
14	Q. Well, obviously, that's	14	A. It doesn't make a
15	different than what you put in your	15	difference.
16	report on Page 29, correct?	16	Q. You didn't test it at 24
17	A. The reason I put it in my	17	hours, did you?
18	report is that Dr. Saed said that this is	18	MR. FROST: Objection.
19	a study linking perineal use of talcum	19	BY MR. SMITH:
20	powder to ovarian cancers. That is not	20	Q. Did you? Yes or no?
21	what Dr. Karageorgi studied here. He	21	MR. FROST: Objection.
22	looked at endometrial cancer risk.	22	THE WITNESS: Low
23	I believe here, and I'd have	23	concentrations, yes, we did.
24	to look, but I see it now. In the	24	BY MR. SMITH:
	,		
	Page 503		Page 505
1	abstract, it was a borderline increase in	1	Q. High concentration. The
2	risk, and it was not related to dose or	2	higher concentration, did you?
3	frequency. And he concludes that future	3	MR. FROST: Objection.
4	studies need to be done to make	4	THE WITNESS: We didn't look
5	conclusions.	5	at asbestos or talc at high
6	Q. On Page 30, on the one,	6	concentrations.
7	two, three, four fourth bullet point,	7	MR. FROST: How are we doing
8	starting "On Page 12," of your report.	8	on time?
9	It says, "On page 12." It goes down and	9	THE VIDEOGRAPHER: You've
10	says, "He does not acknowledge that ATF3	10	got a minute left.
11	was characterized as an inhibitor of	11	BY MR. SMITH:
12	inflammation in our studies, and unlike	12	Q. Okay.
13	asbestos, no changes in gene expression	13	And you talk about
14	were observed at 24 hours in mesothelial	14	Dr. Saed's lack of knowledge about
15	or ovarian epithelial after exposure to	15	ovarian cancer. Have you seen the
16	talc."	16	publications that he's published on,
17	That is not true. They were	17	Doctor?
18	not done at 24 at high concentrations,	18	MR. FROST: Objection.
19	were they?	19	THE WITNESS: Do you want me
20	MR. FROST: Objection.	20	to answer that?
21	BY MR. SMITH:	21	Yes, the few he has which
22	Q. Were they?	22	are not in high impact journals
23	MR. FROST: Objection.	23	and not what they say they are.
24	THE WITNESS: The 24-hour	24	BY MR. SMITH:

127 (Pages 502 to 505)

	Page 506		Page 508
1	Q. Let me tell you what I'll	1	CERTIFICATE
2	tell you what, I take exception to you	2 3	CERTIFICATE
3	laughing and your sarcasm about Dr. Saed.	4	
4	I just want to tell you I take	5	I HEREBY CERTIFY that the
5	A. Well	6	witness was duly sworn by me and that the deposition is a true record of the
6	Q I think that is low rent		testimony given by the witness.
7	and classless.	7	It was requested before
8	But my question to you is,	8	It was requested before completion of the deposition that the
9	do you know if he's published any		witness, BROOKE T. MOSSMAN, M.S., Ph.D.,
10	peer-reviewed literature prior to	9	have the opportunity to read and sign the deposition transcript.
11	litigation on oxidative stress and	10	deposition transcript.
12	inflammation and it leading to ovarian	11	
13	cancer? Do you know at this time?	12	MICHELLE L. GRAY,
14	A. He's had	13	A Registered Professional
15	MR. FROST: Objection.	1 1 4	Reporter, Certified Shorthand
16	THE WITNESS: He's had a few	14	Reporter, Certified Realtime Reporter and Notary Public
17	papers on chemo resistance in	15	Dated: April 9, 2019
18	ovarian cancer cells.	16 17	
19	BY MR. SMITH:	18	(The foregoing certification
20	Q. Have you had any prior	19	of this transcript does not apply to any
21 22	publications in that area?	20 21	reproduction of the same by any means, unless under the direct control and/or
23	MR. FROST: Objection. BY MR. SMITH:	21 22	supervision of the certifying reporter.)
23 24		23	, g
2 <del>4</del>	Q. Yourself?	24	
	Page 507		Page 509
1	A. In chemo resistance, no.	1	INSTRUCTIONS TO WITNESS
2	MR. FROST: How are we	2	
3	doing? We done?	3	Please read your deposition
4	All right. Great. Let me	4	over carefully and make any necessary
5	just consult with my colleague,	5	corrections. You should state the reason
6	but I have a feeling we're done.	6	in the appropriate space on the errata
7	Yeah, we're done.	7	sheet for any corrections that are made.
8	THE VIDEOGRAPHER: This	8	After doing so, please sign
9	concludes today's deposition.	9	the errata sheet and date it.
10	We're going off the record. The	10	You are signing same subject
11	time is 5:55.	11	to the changes you have noted on the
12	(Excused.)	12	errata sheet, which will be attached to
13	(Deposition concluded at	13	your deposition.
14	approximately 5:55 p.m.)	14	It is imperative that you
15		15	return the original errata sheet to the
16		16	deposing attorney within thirty (30) days
17		17	of receipt of the deposition transcript
18		18	by you. If you fail to do so, the
19		19	deposition transcript may be deemed to be
20		20	accurate and may be used in court.
		21	
21		1 77	
22		22	
22 23		23	
22			

128 (Pages 506 to 509)

## Case 3:16-md-02738-MAS-RLS Document 9731-6 Filed 05/07/19 Page 130 of 130 PageID: 33218

Brooke T. Mossman, M.S., Ph.D.

	Page 510				Page	512
1		1		LAWYER'S NOTES		
	ERRATA	2	PAGE	LINE		
2 3		3				
4	PAGE LINE CHANGE	4 5				
5		6				
6	REASON:	7				
7 8	REASON:	8				
9		9 10				
10	REASON:	11				
11 12	DE A CON.	12				
13	REASON:	13				
14	REASON:	14				
15		15 16				
16	REASON:	17				
17 18	REASON:	18				
19		19				
20	REASON:	20				
21 22	DE A COM	21 22				
23	REASON:	23				
24	REASON:	24				
	Page 511					
1						
2	ACKNOWLEDGMENT OF DEPONENT					
3 4	I, , do					
5	hereby certify that I have read the					
6	foregoing pages, 1 - 512, and that the					
7 8	same is a correct transcription of the answers given by me to the questions					
9	therein propounded, except for the					
10	corrections or changes in form or					
11	substance, if any, noted in the attached					
12 13	Errata Sheet.					
14						
15	DD 00VD T 1/02221111111					
16 17	BROOKE T. MOSSMAN, M.S., Ph.D. DATE					
18						
19	Subscribed and sworn					
20	to before me this					
20 21	day of, 20 My commission expires:					
22						
0.3	Notes D.L.					
23 24	Notary Public					

129 (Pages 510 to 512)